

PSYCHOLOGICAL ABSTRACTS

EDITED BY

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RAYMOND R. WILLOUGHBY (*Associate Editor*)
CLARK UNIVERSITY

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CONTENTS

General.....	1272-1300
Sensation and Perception.....	1301-1334
Feeling and Emotion.....	1335-1344
Attention, Memory and Thought.....	1345-1350
Nervous System.....	1351-1368
Motor Phenomena and Action.....	1369-1410
Plant and Animal Behavior.....	1411-1426
Evolution and Heredity.....	1427-1437
Special Mental Conditions.....	1438-1474
Nervous and Mental Disorders.....	1475-1531
Social Functions of the Individual.....	1532-1607
Industrial and Personnel Problems.....	1608-1643
Childhood and Adolescence.....	1644-1676
Educational Psychology.....	1677-1728
Biometry and Statistics.....	1729-1732
Mental Tests.....	1733-1748

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AUTHOR INDEX

- Abel, J. F., 1382
Ackermann, A., 1372
Adrian, E. D., 1351,
1352, 1353
Alderton, C. C., 1308
Alexander, F., 1323
Allen, C. N., 1334
Allendy, D., 1475
Allendy, B., 1309
Allport, G. W., 1345
Alphonse, J., 1377
Amans, Mme. L. F.,
1375
Amberton, W. R., 1354,
1355
André, H., 1411
[Anon.], 1301, 1302,
1325, 1316
Anton, G., 1373
Arlitt, A. H., 1344
Arnstein, E., 1346

Bain, R., 1723
Banerji, M. N., 1308
Barády, H., 1336
Barbour, C. E., 1337
Barcroft, J., 1335, 1339
Barretto, A. P., 1744
Basett, H. C., 1304
Beattie, J., 1356
Beckham, A. S., 1311
Bendana, E., 1333
Berger, H., 1367
Betty, C. A., 1379
Betty, R. J. A., 1478
Besterman, T., 1370
Bingham, W. V., 1312
Blair, H. A., 1305
Blakeslee, A. F., 1427
Blieh Hloist, H., 1313
Bodkin, M., 1339
Bonain, A., 1306
Boring, E. G., 1300
Bose, G., 1433
Bossart, F., 1734
Bourguignon, G., 1412
Bousfield, W. A., 1371
Bovet, F., 1377
Brandt, K., 1314
Bratt, I., 1443
Bremer, F., 1359, 1359
Bretagne, L., 1413
Brethfield, M., 1380
Briscoe, G., 1372
Brockhurst, R. J.,
1304
Brolyer, C. R., 1381
Brook, D. W., 1352,
1350, 1373, 1374
Broom, M. E., 1735
Brower, B., 1361
Brown, G. E., 1330
Brown, F. W., 1439
Bruce, W. F., 1736
Bruker, E., 1315
Brunner, E. de S., 1540
Bühler, C., 1345
Burckhardt, G., 1541
Burgess, E. W., 1542
Burks, B. S., 1737
Buytendijk, F. S. S.,
1411

Caldwell, O. W., 1359
Campbell, C. M., 1477
Carr, L. J., 1545
Carrard, A., 1316
Carrigan, H. A., 1363
Carter, H. D., 1733
Case, R. T., 1363
Christians, A. G., 1317
Clapp, F. L., 1384, 1385,
1386, 1387, 1388
Clark, D. A., 1375
Claude, H., 1478
Clinton, R. J., 1369
Collier, H., 1379
Colucci, C., 1344
Cooper, S., 1363, 1376,
1377
Copeland, M. A., 1374
Corey, S. M., 1380
Cornell, L., 1378
Cox, W. W., 1381
Crawford, A. B., 1318
Crawley, S. L., 1319
Cred, M. S., 1307, 1308,
1379
Crossman, A. W., 1414
Croce, B., 1375
Crockett, A. C., 1380
Crowden, G. P., 1359
Cureton, B. E., 1730
Cutler, T. H., 1321

Dale, H. H., 1381
Daly, C. D., 1345
D'Antona, K., 1309
Dayton, N. A., 1480,
1481
De Almeida, N. O., 1382
De Flairy, M., 1382
Delaville, M., 1341
Dei Greco, Fr., 1452
Delhomme, A., 1382
Dennis, W. V., 1346
Denny, J. C., 1708
Denny, J. C., 1362,
1384, 1385, 1386
De Sanctis, R., 1440
De Sansure, R., 1347
Desotile, H., 1441
Devine, H., 1434
Dickinson, S., 1387
Dido, M., 1455
Doll, E. A., 1456, 1487,
1392
Dono, G., 1348
Douglas, H. R., 1729
Downs, A. C., 1314
Downing, A. G., 1384,
1385
Dudyha, G. J., 1346
Dufay, M. J., 1310
Dugas, L., 1322
Dumestre, J. O., 1414
Dunlap, J. W., 1739
Dunlap, K., 1336
Dwelschauers, G., 1411

Eccles, J. C., 1377, 1379,
1385, 1389, 1390
Ehrenberg, R., 1393
Endres, F. C., 1442
Essertier, D., 1540
Ewen, J. H., 1438

Faasbender, —, 1368
Federn, —, 1443
Feld, F., 1394
Ferguson, M. R., 1350
Feinberger, S. W., 1376
Ferrari, C. A., 1323
Ferrari, G. C., 1489,
1347
Fessard, A., 1311
Finkleman, B., 1391
Finley, J. B., 1395
Fladland, S. V., 1312
Flügel, J. C., 1351
Foucault, M., 1377
Freeman, G. L., 1415
Friedemann, M., 1490
Frischsen-Köhler, L.,
1428
Fritz, M. P., 1416
Fulton, J. F., 1363,
1392

Gaddum, J. H., 1381
Gade, —, 1308
Ganguli, M., 1378
Gardner, G., 1396
Garlin, T. R., 1332
Gates, A. I., 1397
Gemelli, A., 1337, 1338,
1444, 1324
Gengerelli, J. A., 1417
Gerini, C., 1491
Gernet, M., 1353
Gianelli, V., 1492
Gillespie, R. D., 1494
Gilliland, A. R., 1279,
1739
Glover, E., 1484
Glueck, B., 1348
Goldenfoun, Z., 1378
Grammont, M., 1354
Granit, R., 1307, 1313,
1388
Gray, H. A., 1356
Greene, R. A., 1493
Greider, C. E., 1314
Grimbert, C., 1494
Grindley, J. C., 1315
Gross, J., 1349
Grayer, M., 1325
Guidetti, L., 1355
Guillaume, P., 1418
Gun, W. T. J., 1429
Gunnison, F., 1216

Haggarty, M. E., 1350
Halbwachs, M., 1356
Hall, O. M., 1399
Hanselmann, —, 1351
Harding, R. D., 1308
Hardy, G., 1357
Haydon, A. E., 1358
Healy, W., 1359
Heilmann, W., 1396
Heinle, —, 1393
Heinlein, C. P., 1280
Herberts, —, 1281
Hermann, W., 1317
Hersey, E. R., 1327
Hessard, A., 1350
Heubner, R. P., 1395
Hevner, K., 1351
Hightower, P. R., 1355
Hill, J. C., 1354
Hilber, V. M., 1363
Hilbert, P., 1425
Hilton, H., 1395

Hinsie, L. E., 1496
Hirschmann, R., 1445
Hoffman, H., 1446
Höfer, A., 1283
Hollingworth, L. S.,
1356
Hollmann, F., 1497
Holub, A., 1430
Homes, G., 1358
Huber, F., 1399
Hull, C. L., 1283
Humphrey, G., 1284

Ingraham, F. D., 1363
Innakel, K., 1352
Irving, W. S., 1447

Janet, P., 1446
Joussain, A., 1330
Judd, D. H., 1285, 1318
Jung, C. G., 1449

Kahn, E., 1408
Keen, A. M., 1740
Kelley, T. L., 1700
Kendrew, E. N., 1389
Kenworthy, M. E., 1450
Khaifin, V., 1353
King, A. H., 1328
Kirpatrick, C., 1451
Klein, D. B., 1286
Klein, M., 1484
Kleist, K., 1489
Knight, F. B., 1716
Koch, —, 1368
Kohs, A. C., 1432
Konorski, J., 1394
Korhauser, A. W.,
1701
Kothe, A., 1364
Kremleva, T., 1365
Kreischner, E., 1453
Kronfeld, A., 1484, 1506
Krupenina, M., 1367
Kucharski, P., 1319

Lagrange, H., 1320
Laignel-Lavastine, —,
1300
Laird, J., 1347
Larguler de Bancels,
J., 1395
Laughton, N. B., 1401
Laugier, H., 1396, 1397
Lehman, H. C., 1702
Lembke, W., 1367
Lenoir, R., 1368
Leriche, —, 1321, 1322
Levi, L., 1301
Leyshon, W., 1372
Liddell, E. G. T., 1302
Litt, T., 1703
Lockhart, E. G., 1355
Lombardo-Radice, G.,
1704
Long, C. N. H., 1256
Lord, J. R., 1287, 1302
Lorigo, G., 1329
Lucklesch, M., 1323,
1324
Ludeman, W. W., 1741
Lugaro, E., 1395
Lundeen, G. E., 1399
Luquet, G. H., 1369
Lutz, —, 1455
Lutz, J., 1456
Lythgoe, R. J., 1325

Maccurdy, J. T., 1340
Macewicz, P., 1326
Macrae, A., 1380
Macauda, P., 1390
Madsberg, B., 1303
Manning, W. H. O'N.,
1381
Manquat, M., 1411
Marinaccio, G., 1504
McAnelly, J. R., 1741
McCarthy, D., 1742
McClure, W. E., 1705
McCormick, M. J., 1570
McCullough, E., 1379
McDougall, W., 1295
McGloose, H., 1304
McSwiney, H. A., 1400
Mall, R., 1742
Meng, —, 1443
Meyer, E., 1505
Meyerson, E., 1289
Miles, G. H., 1332
Miller, E., 1308
Miller, F. R., 1401
Miller, S., 1394
Millas, W. W., 1706
Milner, M., 1390
Minkowski, —, 1307
Mochi, A., 1390
Montague, H., 1371
Montasut, M., 1341
Morgan, C. L., 1419
Morgan, J. J. R., 1279
Moss, F. K., 1323
Muggia, A., 1382, 1396
Mukherji, K. C., 1372

Munro, M. S., 1384
Murdoch, J. M., 1306
Murphy, D. P., 1487
Muse, M. R., 1707
Myerson, A., 1309

Nathan, M., 1457
Neisser, C., 1310
Nelson, M. J., 1706
Neosaskine, H., 1397
Newcomb, T. M., 1458
Niceforo, A., 1373
Nichols, M. S., 1374
Nicola, J. E., 1311
Nifenecker, M. A., 1709
Nilsson, M. P., 1375
Nohl, H., 1439
Noll, V. H., 1710

Ojemann, E. H., 1402
Oliver, H. A. C., 1711
Olson, W. C., 1350
Overman, J. H., 1713

Papay, J. W., 1415
Partridge, G. E., 1400
Patris, M. L., 1377
Paul, R., 1291
Pavlov, I. P., 1403
Payne, S., 1484
Pende, N., 1378
Pennacchi, F., 1361
Penta, P., 1312
Perkins, H. F., 1431
Pernambuco, U., 1744
Peterson, J., 1376
Petrén, A., 1313
Petri, O., 1461
Petrie, A. A. W., 1314
Pfug, —, 1368
Piéron, H., 1292
Philbiad, C. T., 1379
Pioli, G., 1462
Placci, C., 1463
Plant, J. S., 1363
Ponso, M., 1293, 1713
Popenoe, P., 1432
Portier, P., 1420
Poulton, E. P., 1294
Pratt, G. K., 1359
Pressey, L. C., 1714
Presser, S. L., 1714
Pressolini, M., 1364
Prince, W. F., 1464
Pritchard, E. A. B.,
1404
Proctor, W. M., 1715
Pucc, A., 1342

Quenael, F., 1405

Rackley, L. E., 1343
Raphael, W., 1364
Reckless, W. C., 1363
Reikh, V., 1465
Reitz, G., 1381
Repp, A. C., 1716
Reuter, S. B., 1382
Rey, A., 1327
Reynolds, C. N., 1383
Rice, S., 1384
Richard, G., 1385
Richards, J. E., 1335
Riech, D. McK., 1392
Rizzatti, E., 1406
Roaf, H. E., 1328
Robb, J. R. B., 1315
Roberts, J. A. F., 1483
Robin, G., 1364, 1365
Robinson, B., 1354
Robinson, C. S., 1390
Robinson, V. P., 1586
Robson, J. M., 1400
Roggero, E., 1348
Rolie, H., 1717
Rose, M., 1421
Ross, M., 1316
Ross, V. B., 1718
Rossi, M. M., 1466
Roth, T., 1366
Rubinstein, F., 1349
Ruckmick, C. A., 1344
Rudy, H., 1407
Ruiz-Funes, M., 1387
Russell, M., 1341
Russell, B., 1388

Sadler, W. S., 1467,
1326
Salkowski, —, 1395
Salter, Mrs. W. H.,
1468
Scarborough, C., 1387
Schafter, K., 1317
Schaper, —, 1368
Scheldrup-Ebbe, T.,
1350
Schmits, O. A. H., 1469
Schob, P., 1395
Schroeder, W. C., 1422
Schultz, I. H., 1470
Schwegler, M. E., 1310

Schweb, —, 1300
Seefeld, C. F., 1389
Scripture, M. W., 1390
See, H., 1338
Segond, J., 1295, 1391
Sergi, G., 1307
Shaw, W. S. J., 1318
Sherman, M., 1392
Sherrington, C. S., 1396,
1384, 1399, 1390, 1408
Simester, E., 1434
Simkins, C. S., 1397
Skiff, T., 1435
Slonimsky, N., 1329
Smeltzer, C. H., 1719
Snyder, E. D., 1393
Söderbergh, G., 1330
Spadolini, N., 1471
Spasokutskii, N. N.,
1394
Spearman, C., 1745
Spranger, E., 1368, 1729
Sprowls, J. W., 1395
Spurrell, W. R., 1294
Stalnaker, J. M., 1721
Steffen, A., 1346
Stekel, W., 1397
Stephens, E. G., 1331
Stern, W., 1399
Stevens, S. N., 1279
Stiles, W. S., 1332
Stockmayer, W., 1472
Stoke, S. M., 1702
Stout, G. F., 1296
Strecker, E. A., 1319
Streicher, M., 1723
Struve, K., 1370
Surdon, G., 1398
Suter, J., 1746
Sydenstricker, E., 1436
Symonds, P. M., 1731

Tanner, W. L., 1423
Tansley, K., 1325
Taylor, A. H., 1333
Teale, R. P., 1397
Telford, C. W., 1376
Themel, K., 1371
Thompson, S. H., 1424
Thormeyer, P., 1298
Tiebout, H. M., 1590
Tinsbergen, J., 1299
Tireman, L. S., 1723
Torp, H., 1409
Tryon, R. C., 1425
Tumlin, O., 1724
Turner, J. S., 1520

Umrat, K., 1383

Vajkai, J. E., 1372
Valentine, C. W., 1373
Vannell, A., 1321
[Various], 1398, 1323
Veleminsky, K., 1374
Vernon, H. M., 1330,
1340
Vernon, M. D., 1410
Verrier, M. L., 1426
Verwoy, J., 1300
Vidoni, G., 1391, 1341
Villey, P., 1334
Villinger, W., 1302
Visconti-Venosta, C. C.,
1323
Vislick-Young, P., 1363
Viteles, M., 1342
Vogt, —, 1398
Vold, G. B., 1304
Vurpas, C., 1324

Walker, N. T., 1725
Wallace, G. L., 1325,
1326
Waller, W., 1305
Wallon, H., 1343
Walters, F. C., 1728
Warner, G. C., 1294
Watkins, H. M., 1327
Weaver, W., 1732
Wefring, K., 1328
Weinland, J. D., 1747
Wells, F. L., 1748
Werner, H., 1306
Wheeler, H. B., 1331
White, R. C., 1473
Whitely, R. L., 1375
Wickman, E. K., 1360
Wigmore, J. H., 1315
Wilke, E., 1727
Williams, F. E., 1474,
1376
Wilson, G. M., 1700
Wingfield, A. H., 1437
Woodburne, A. S., 1307
Woodworth, R. S., 1300

Yeppen, L. N., 1728
York, R. A., 1329
Young, E. V., 1398,
1397, 1398

Zimmerman, —, 1368
Zwirner, E., 1390, 1321

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Vol. V, No. 3

MARCH, 1931

GENERAL

1272. Ackermann, A. *Über Allgemeingültigkeit psychologischer Beobachtungen.* (Concerning the universal validity of psychological observation.) *Psychol. Rundschau*, 1930, 2, 200-208.—The author notes the two extremes of psychological observation; the one the exact method, which is a purely automatic registering apparatus; the other pure uncontrolled intuition, which can hardly be spoken of as having a method. The author senses seven grades between these two extremes and discusses them: (1) substitution of a person for the mechanical registering, the results to be statistically treated without interpretation; (2) the elimination from test results, before these are used for interpretation, of selected cases varying widely from the characteristic used for grouping; (3) a further deviation from accuracy lies in elimination of data of manifest non-validity due to poor technique in testing, etc., in which one is using personal judgment; (4) the interpretation of observation in the light of personal experience; (5) the more rational approach in interpretation, leading to inferences drawn; (6) the method in which intuition is based on feeling, not on reasoning, and reasons for conclusions are not sensed; (7) the last step in unscientific psychotechnics is seen in pure intuition, so-called "hunches" without basic reasons, a judgment having value only for the judge. The author analyzes the type of intuitive observation which reads physical manifestations into their psychic significances and emphasizes the need of this method to go hand in hand with rational interpretation and statistical methods. The more valuable the means employed, the greater the likelihood of accuracy of judgment.—A. B. Herzig (Michigan Central State Teachers College).

1273. Anton, G. *Theodor Meynert; seine Person, sein Wirken und sein Werk.* (T. Meynert; his personality, his writings and his work.) *J. f. Psychol. u. Neur.*, 1930, 40, 256-281.—H. Marshall (Stanford).

1274. Copeland, M. A. *Psychology and the natural science point of view.* *Psychol. Rev.*, 1930, 37, 461-487.—Using the term "behaviorism" to designate the natural-science viewpoint in psychology and social science, the author attempts to show how behaviorism, adhering rigorously to natural-science methods and assumptions, can answer all the scientific problems of human nature. He first formulates the "natural-science creed"; this assumes uniformity and predictability of events, a knowledge of wholes from their parts, control from antecedent to consequent, and limits itself to events which are "objectively observable," meaning that one observer can be substituted for another of the same event. It denies

the hypothesis of emergent evolution, that mind is an emergent rather than a form of behavior of the physical organism. It does not omit the observer's report, but does not treat it as introspective observation, and it has faith that there is no aspect of man's existence which it is impossible to devise a technique to study objectively. The behaviorist does not omit desire, will, choice, etc., but re-defines them in non-teleological terms, to preserve the universality of the assumption of cause preceding effect. It treats "function," but in the biological sense. A behavioristic account of human thinking is incomplete in that it deals with the ontogenetic aspects of the problem, and must be supplemented by an "institutionalistic" consideration of cultural heritage and group behavior. The categories of perception, desire and purpose, values and meaning, knowing responses and thinking, pain, fear and anger, and finally scientific observation itself, are all given interpretation in terms of stimulus, response, and the "dominant complex." Desire and purpose are a special case of the dominant complex; value, an attribute of objects qua stimuli, dependent on individual habits and group mores; thinking is purposive behavior in which the preparatory responses are symbolic, depending on individual habits and group mores; the subject-object relation of epistemology is a special case of the stimulus-response relation, involving a verbal perception response; and scientific observation is a subclass of verbal perception, defined by the mores of the scientific cult.—A. G. Bills (Chicago).

1275. Croce, B. *Gesammelte philosophische Schriften in deutscher Übertragung.* (Collective philosophical writings in German translation.) Tübingen: Mohr, 1930. M. 72.00.—W. S. Hunter (Clark).

1276. Fernberger, S. W. *The publications of American psychologists.* *Psychol. Rev.*, 1930, 37, 526-544.—A study of the publications of members of the American Psychological Association listed in the Psychological Index from 1919 to 1928. It shows a sex difference in favor of men for frequency and consistency of publication in all fields except child psychology; a geographical difference in favor of the northeast; a slightly greater productivity of recent Ph.D.'s; a greater interest in experimental, applied, and animal psychology on the part of more recent Ph.D.'s; and finally, an effect on productivity of the place of taking the degree and the present residence, i.e., whether in large or small community.—A. G. Bills (Chicago).

1277. Foucault, M. *Premières leçons de psychologie expérimentale.* (First lessons in experimental psychology.) Paris: Delagrave, 1930. Pp. 90.—

Presentation is made of a small number of experiments whose technique is simple and well established and which do not demand cumbersome and expensive apparatus. The experiments are easy to repeat, for both subject and experimenter, and each group is followed by comments upon the theoretical and practical problems which the facts have raised or upon which they have shed new interpretative light. The author treats successively visual sensations (3 experiments), elementary cutaneous sensations (2 experiments), images and association (4 experiments), mental work (3 experiments), tactile perception of space (4 experiments), intelligence and tests (3 experiments), and voluntary movement (2 experiments). An appendix contains directions and colored papers. No bibliography.—*Math. H. Piéron* (Sorbonne).

1278. Ganguli, M. A report on the time-adjustment of the Hipp-chronoscope. *Indian J. Psychol.*, 1930, 5, 25-36.—An explanation of procedure followed in the careful adjustment and use of the chronoscope, with tables, readings and illustrations.—*L. A. Averill* (Worcester State Normal School).

1279. Gilliland, A. R., Morgan, J. J. B., & Stevens, S. N. General psychology for professional students. New York: Heath, 1930. Pp. vii + 439. \$3.20.—The authors discuss such topics as the purpose of psychology, the human organism, innate behavior, sensory processes, attention, perception, learning, memory, thinking, emotional behavior, mental alertness, personality, social behavior, personal efficiency, motivation, sleep, dreams, hypnosis, and mental health. Factual rather than theoretical contributions are stressed. Particular attention is given to applications. There are many original figures and illustrations.—*N. L. Munn* (Pittsburgh).

1280. Heinlein, C. P. An electromagnetic touch-stimulus reaction key. *Science*, 1930, 72, 606.—This key was designed for the investigation of tactual reaction time. The rubber finger knob of an electric key is provided with a circular hole through which a hard-rubber plunger rod passes from below. A magnetic coil, activated by the experimenter, produces an upward linear movement in the plunger, bringing it in contact with the subject's finger on the concave cushion knob. Release of the reaction key by the subject causes contact to be made between two platinum terminals at the other end of the rocker arm. A chronoscope hook-up is presented in which the reaction key and the Heinlein duo-circuit stimulus key are used in the conventional Dunlap chronoscope circuit. On closing the stimulus key, the magnetic coil of the reaction key and the magnetic coil of the chronoscope friction clutch are simultaneously activated. On release of the reaction key the chronoscope pointer is brought to a state of rest. Reaction times to visual or to auditory stimuli may be measured by the same reaction key by shifting the stimulus control current from the plunger coil to head phones or to a suitable light.—*N. Goldman* (Clark).

1281. Herbertz, — Wandlung des Seelensymbols. (Changing concepts of the soul.) *Psychol. Rundschau*, 1930, 2, 225-228.—With efforts from Stagira down through experimental psychology to the psychotechnics of today, the concept of the soul

has eluded all investigation. Two attitudes of the student may be recognized, the observing and the analyzing types. The former regards it as a symbol, the latter as an allegory. The latter is without feeling, the former feels himself into it intuitively. The author holds that the modern psychologist has not wholly lost his feeling for the soul in spite of his analytical attitude. The soul as being, as energy, as levels of consciousness, is the object of the demand for understanding today.—*A. B. Herrig* (Michigan Central State Teachers College).

1282. Höfler, A. *Psychologie*. (Psychology.) (2d ed.) Wien: Hölder-Pichler-Tempsky A. G., 1930. Pp. xv + 642. M. 36.00.—*W. S. Hunter* (Clark).

1283. Hull, C. L. Knowledge and purpose as habit mechanisms. *Psychol. Rev.*, 1930, 37, 511-525.—Offering an analysis of knowing, ideationally controlled action, and purpose defined as foresight, in terms of stimulus-response mechanics. First, knowledge is a parallel reaction sequence to the external world sequence, which by the principle of redintegration has acquired the ability to "run off by itself." Second, foresight is the tendency, when the external and organismic sequences start simultaneously, for the reaction sequence to "run off at a faster rate." The possibility of extended habit sequences being executed by the organism with an instrumental act only at the end gives us the pure stimulus act, or symbolic or ideationally initiated behavior. When these internal reaction sequences involve the presence of a persistent unchanging stimulus, there is generated a new phenomenon—intraserial competition—by means of which a short-circuiting of the whole chain occurs, and a dropping out of all the undesirable segments.—*A. G. Bills* (Chicago).

1284. Humphrey, G. Learning and the living system. *Psychol. Rev.*, 1930, 37, 497-510.—An attempt to show that learning may be described by the use of modern physical terms as the capacity possessed by the more complex of living systems to make an adjustment to a four-dimensional situation of a certain nature. A living system is described as differing from an inorganic complex merely in possessing the organization necessary to initiate of itself compensatory changes when external conditions are altered. Change in the external vital conditions of such an organic complex is a stimulus; the resulting systemic changes, adjustments, of the organism are responses. As biological evolution progressed, organic complexes were able to respond more and more intimately to changes in environment, until the power was developed to make a dynamic adjustment to a highly complex four-dimensional manifold. This is the power to learn.—*A. G. Bills* (Chicago).

1285. Judd, D. B. Precision of color temperature measurements under various observing conditions; a new color comparator for incandescent lamps. *Bur. Standards J. Res.*, 1930, 5, 1161-1177.—It is indicated from observations by two observers on sensibility to change in color temperature that sensibility to change in chromaticity for normal vision is increased as the size of the observing field is increased. The presence of a dividing line be-

tween the two halves of the observing field is found to decrease the sensibility, the wider the line the greater being the decrease; but a black line was found to cause a considerably greater decrease in sensibility than a light gray line. Evidence is given which tends to show that the foveal and para-foveal retinal regions of a supposedly normal observer are asymmetrical in blue-yellow sensitivity about the vertical median line; that is, the nasal halves of these regions seem to be distinctly yellow-sensitive relative to the temporal halves.—*D. B. Judd* (Bureau of Standards).

1286. Klein, D. B. Eclecticism versus system-making in psychology. *Psychol. Rev.*, 1930, 37, 488-496.—Psychology should copy the other natural sciences, physics, chemistry, etc., and give up its bewildering multiplicity of systems. The "system" method is to adopt some "basic" explanatory principle, and then try to explain all phenomena by it, whereas physics confines the use of an explanatory principle to the particular group of phenomena to which it is applicable. An eclectic uses all systems, and may explain the various phases of a given phenomenon now according to one, now according to another. Thus the study of space perception should utilize association, redintegration, Gestalt, or conditioning, depending on which is most applicable to characterize the particular phase dealt with.—*A. G. Bills* (Chicago).

1287. Lord, J. R. Psychology the science of the mind. *J. Ment. Sci.*, 1930, 76, 543-545.—"The Introduction to Great Britain's Contribution to the International Mental Hygiene Library." This "occasional note" contains a very brief historical résumé of the history of psychology as a science, which is considered essential to a satisfactory stock-taking in the literary field of the present-day mental-hygiene movement.—*E. M. Ligon* (Union).

1288. McDougall, W. Science: yesterday and today. *Psychology. Spectator*, 1930 (Nov. 8th), 659-660.—This article is one of a series on new conceptions and methods that are being developed in various sciences. The atomic materialism of nineteenth century psychology (which still has numerous exponents) with its denial of the causal efficacy of psychic processes, is being challenged by those who assert the unity of the organism and the importance of mental processes, non-conscious as well as conscious, for an explanation of human conduct. The work of students of brain functions, the Gestalt school and Freud is forcing the abandonment of atomic materialism in psychology.—*B. Casper* (Clark).

1289. Meyerson, E. La pensée et son expression. (Thought and its expression.) *J. de psychol.*, 1930, 27, 497-543.—A portion of the author's *Du Cheminement de la Pensée*. The peripatetic system, because of its ideational sterility, has often prevented the progress of knowledge. It is claimed that theories and classifications are often as valuable to the advancement of knowledge as quantitative facts. There is a lengthy discussion of the views of various philosophers from Aristotle to Bergson. The author finds support for his own point of view in the his-

tory of the physical sciences.—*N. L. Munn* (Pittsburgh).

1290. Mochi, A. Il problema dei rapporti fra teoria e pratica in psicologia. (The problem of the relations between theory and practice in psychology.) *Riv. psicol.*, 1930, 24, 42-62.—The author observes that the greatest obstacle which impedes the development of positive psychology and of its applications is to be found in the fact that these last teach one part of humanity to work on the rest of humanity. The progress of scientific psychology and of its applications is today dependent on the possibility of being able to announce practical programs, unanimously expressed and universally accepted, on the order of those that are basic for medicine (i.e., it is good to heal the sick) or for a part of pedagogy (i.e., it is well to impart determined ideas to those who do not possess them).—*T. M. Abel* (Sarah Lawrence).

1291. Pauli, R. Psychologisches Praktikum. (Psychological practicum.) (4th ed.) Jena: Fischer, 1930. Pp. xii+244. M. 9.50.—*W. S. Hunter* (Clark).

1292. Piéron, H. Spectrocolorimètre permettant d'étudier l'influence du temps sur la saturation apparente des couleurs. (Spectro-colorimeter which permits the study of the influence of time upon the apparent saturation of colors.) *Rev. d'optique*, 1930, 9, 5-16.—Description of an apparatus which permits the comparison of two regions in which one regulates the illumination in quantity, wave-length, and purity. The chromatic flux of one region may be substituted for a flux of white light during a controlled time interval. As a result the author has been able to confirm that the perceived saturation begins with a latent time, passes through a maximum, and then decreases in an uninterrupted manner. The speed of the establishment of the maximal chroma is different for the red radiations (maximum speed) and the blue radiations (minimum speed), the green radiations being intermediate. The author has thus been able to verify directly the hypothesis that he has made concerning the interpretation of the rings on Bentham's top by the inequality in the speeds of establishment of the subjective colors.—*Math. H. Piéron* (Sorbonne).

1293. Ponzio, M. Principes et facteurs du dynamisme psychique dans les recherches de l'école de psychologie de Turin. (Principles and factors of psychical dynamism in the researches of the Turin school of psychology.) *J. de psychol.*, 1930, 27, 614-645.—A French translation of the author's contribution to the International Congress of Psychology. The chief researches of the Turin laboratory are presented. The author stresses their dynamic character. There is a bibliography of 25 titles, 22 of which refer to Ponzio's own experiments. 12 figures.—*N. L. Munn* (Pittsburgh).

1294. Poulton, E. P., Spurrell, W. R., & Warner, G. O. A convenient form of closed circuit respiratory apparatus for measuring simultaneously the carbon dioxide output and the oxygen intake over short or long periods. *J. Physiol.*, 1929, 67, 423-428.—The apparatus involves no expensive additions to

the usual equipment of a physiological laboratory.—*G. C. Grindley* (Cambridge, England).

1295. *Segond, J. Traité de psychologie.* (A treatise on psychology.) Paris: Colin, 1930. Pp. 500. 45 fr.—There are seven parts to this work: organic life, the affective life, the formation of ideas, complex forms of intelligence, mental activity, perception, the will and consciousness. There is no bibliography.—*Math. H. Piéron* (Sorbonne).

1296. *Stout, G. F. Studies in philosophy and psychology.* New York: Macmillan, 1930. Pp. xiii + 408. \$4.50.—A collection of essays, the first half of which are on psychological and the last half on philosophical subjects. The chapter headings are: I, The Herbartian Psychology; II, Voluntary Action; III, Perception of Change and Duration; IV, The Nature of Conation and Mental Activity; V, Ward as a Psychologist; VI, the Common-sense Conception of a Material Thing; VII, Things and Sensations; VIII, In What Way is Memory Knowledge Immediate?; IX, Bradley's Theory of Relations; X, Bradley's Theory of Judgment; XI, Bradley on Truth and Falsity; XII, Russell's Theory of Judgment; XIII, Error; XIV, Immediacy, Mediacy and Coherence; XV, Real Being and Being for Thought; XVI, Some Fundamental Points in the Theory of Knowledge; XVII, The Nature of Universals and Propositions. The essays are in the main arranged according to the chronological order in which they were written, with the exception of the essay on memory-knowledge, which is the most recent of all. The most striking feature in the essays is the gradual shift in the author's epistemology, which has taken place during the period of time covered by the essays.—*A. G. Bills* (Chicago).

1297. *Teele, R. P. Gas-filled lamps as photometric standards.* *Trans. Illum. Eng. Soc.*, 1930, 25, 78-96.—Data from the Bureau of Standards are presented.—*M. N. Crook* (Dartmouth).

1298. *Thormeyer, P. Philosophisches Wörterbuch.* IV. (Philosophical dictionary. IV.) Leipzig: Teubner, 1930. Pp. vi + 231. M. 6.00.—*W. S. Hunter* (Clark).

1299. *Tinbergen, J. Mathematiese psychologie.* (Mathematical psychology.) *Mensch en Maatschappij*, 1930, 6, 342-352.—This is an application to economics and related subjects of the scientific method described and employed by Edgeworth in his *Mathematical Psychics* and also used by Vilfredo Pareto, the Genevan economist. The core of this method is the idea "that the 'psyche' of an individual is described through 'functions of equal *ophelimité*.'" *Ophelimité* is a term used by Pareto to signify utility in a very large sense, as synonymous with exchange value, not mere practical utility. The latter would exclude luxuries and certainly noxious substances, which, however, might quite conceivably have exchange value, that is, *ophelimité*. It is possible to determine experimentally what combinations of two goods are valued equally highly by a given individual, although it is not possible to tell how highly he values each. These evaluations appear both in exchange for fixed price and in isolated barter between individuals. They can be symbolized in geometrical and algebraic form and are so symbo-

lized in the present article. The author discusses various questions for which it appears to him that expansion of research in mathematical psychology might help to find answers. He asks, for example, whether the utility lines of different individuals vary with vocation, health, etc., whether they differ for different groups of goods, such as food, shelter, amusement, or education, etc. Mathematical psychology also has a bearing upon the analysis of the sense of justice, as shown in the rules governing the distribution of goods, one of the oldest of social problems. The criterion of justice appears to be equal treatment of individuals in the same circumstances, as by giving equal pay for equal amounts of the same kind of work. Where the circumstances of the two individuals differ, treatment must also differ to insure justice. Where the individual lacks power of free movement, that is, where he is forced to accept conditions as he finds them, a just distribution of burdens and pleasures does not arise naturally and must be consciously striven for. The method of mathematical psychology can be useful in the clarification of such issues.—*E. M. Pülpel* (New York City).

1300. *Woodworth, R. S., & Boring, E. G. Ninth International Congress of Psychology: report of the treasurer, with a note by the secretary.* *Psychol. Bull.*, 1930, 27, 565-566.—*J. F. Dashiell* (North Carolina).

[See also abstracts 1404, 1408, 1516, 1522.]

SENSATION AND PERCEPTION

1301. [Anon.] *Code of lighting: factories, mills and other work places.* *Trans. Illum. Eng. Soc.*, 1930, 25, 607-636.—This code, issued by the Illuminating Engineering Society, has just been revised. It contains, among other things, a table of recommended levels of illumination for industrial interiors.—*M. N. Crook* (Dartmouth).

1302. [Anon.] *Revision of the American standard illuminating engineering nomenclature and photometric standards.* *Trans. Illum. Eng. Soc.*, 1930, 25, 725-741.—*M. N. Crook* (Dartmouth).

1303. *Banerji, M. N. Incidence of smell. Theory of surface friction.* *Indian J. Psychol.*, 1930, 5, 87-94.—Suggests that the rôle played by smell in psychic life is often not fully appreciated. Discusses the predominant part which this receptor plays in the animal. It is the sole instrument of recognition and discrimination in the human baby from the end of the second week until the visual and auditory receptors begin to function somewhat later. Believes that sniffing actively provokes the hair cells on the olfactory mucous surface through surface friction. The odorous particles set the hair cells in vibration according to their own weight or momentum, the impacts giving rise to images which fuse to evoke the sensation of smell. Describes three confirmatory experiments. Accounts satisfactorily for fatigue, latent period, rivalry, and compensation, the last named being referred to the higher centers.—*L. A. Averill* (Worcester State Normal School).

1304. *Bazett, H. C., McGlone, B., & Brocklehurst, R. J. The temperatures in the tissues which accom-*

pany temperature sensations. *J. Physiol.*, 1930, 69, 88-112.—Light thermocouples have been introduced into the skin of the forearm in the neighborhood of warm and cold spots, and records of the temperature changes accompanying sensations of warmth and cold have been taken. By correlation of the latencies of sensation with the rate of penetration, estimates of the depth of the end organs have been made. These are 0.15 ± 0.1 for cold and 0.6 ± 0.2 for warmth. The end organ for warmth cannot lie in the subdermal tissues. The end-bulbs of Krause may be end organs for cold. The rate of penetration of thermal changes varies greatly with the vascular state; and changes in vascular conditions due to the pressure of the applicator on the skin introduce serious complications. Paradoxical sensations and after-sensations are discussed.—*G. C. Grindley* (Cambridge, England).

1305. Blair, H. A. Critical frequency measurements in anomalous trichromatic vision. *J. Opt. Soc. Amer.*, 1930, 20, 601-615.—Critical frequency measurements for the light adapted anomalous trichromatic eye were made on spectra of fourteen intensities. No Purkinje effect was observed. The Ferry-Porter law is apparently obeyed, but the branches of the Porter graphs are more numerous than for normal vision. The results are interpreted by Allen's visual reflex theory. Critical frequency measurements at points from the fovea toward the temporal periphery for three wave lengths in the yellow fall on three distinct curves. The ends of the first two probably mark the boundary of the fovea and the macula lutea respectively. One peripheral normal curve is given.—*D. B. Judd* (Bureau of Standards).

1306. Bonain, A. Une nouvelle physiologie de l'audition. (A new physiology of audition.) *J. de physiol. et de path. gen.*, 1930, 28, 321-336.—The author bases his theory particularly upon the diffusion of sound waves in the organ of Corti. The sound waves dissociated by the network of Corti would develop stationary waves in the small pockets included between the tectorial membrane and the neighboring reticulate membrane, thus arousing vibratory movements in the portions of the membrane in contact with the curved cilia of the auditory cells.—*Math. H. Piéron* (Sorbonne).

1307. Creed, R. S., & Granit, R. On the latency of negative after images following stimulation of different areas of the retina. *J. Physiol.*, 1928, 66, 281-298.—The latent period preceding the appearance of the negative after-images of a small white disc has been measured at varying distances from the center of the field of vision. The latent period is longest at the center and shortest at the periphery; the curve of latent period does not fall continuously, but has a second maximum about 2° from the center of the field. This is interpreted as being due to the change from cones to rods. The after-images of discs of varying radius, fixated at their center, give a similar curve, the latent period being that corresponding to the contour of the disc. These facts, and the phenomenology of the images, afford evidence of the inhibition of the cone mechanism by the

rod mechanism.—*G. C. Grindley* (Cambridge, England).

1308. Creed, R. S., & Harding, E. D. Latency of after images and interaction between the two retino-cerebral apparatuses in man. *J. Physiol.*, 1930, 69, 423-441.—After visual fixation of the center of a white disc, the latent period before the appearance of negative after-images was measured under varying conditions. On a black field, binocular images occur earlier than unocular images. If the disc is seen only by one eye, and the after-image projected onto a white screen seen only by the other, the latent period is longer than when the same eye is used throughout. The results are regarded as due to interaction of the retino-cerebral apparatuses at a sub-perceptual level.—*G. C. Grindley* (Cambridge, England).

1309. D'Antona, S. La sensibilità generale. (General sensitivity.) *Riv. di neur.*, 1930, 3, 191-224.—A general review of the question is presented. As a working hypothesis the author assumes that protopathic sensitivity involves for the most part sympathetic pathways; epicritic sensitivity, cerebrospinal pathways. Ordinarily the two cooperate, but in certain pathological conditions the type of control exercised by the epicritic sensitivity disappears and the protopathic sensitivity reveals its particular manifestations.—*G. C. Ferrari* (Bologna).

1310. Dufay, M. J., & Schwegler, M. R. La mesure visuelle des brillances très faibles. (The visual measurement of very weak brightnesses.) *Rev. d'optique théor.*, 1930, 9, 263-278.—For an eye in perfect repose, i.e., after about fifteen minutes of darkness, the minimum of perceptible brightness for looking at a region of rather large diameter is in the neighborhood of 10^{-10} candle power per square centimeter. This is about the intensity that is found in all brightness affecting the eye from the atmosphere, assuring proper visual measurement under good conditions. However, for brightness below 10^{-8} candle power per square centimeter precision of measurement decreases very quickly, and below 10^{-9} photometric equalization becomes very uncertain.—*Math. H. Piéron* (Sorbonne).

1311. Fessard, A. Sur la loi de variation des temps de latence en fonction de l'intensité d'excitation pour les sensations tactiles. (Concerning the law of the variation of latent times as a function of intensity in tactile sensations.) *C. r. Soc. biol.*, 1930, 104, 1252-1254.—The author, wishing to check with his new set-up (utilizing the edge of a mirror of the Du Bois oscillograph as the excitant) the laws of tactile excitation expressed by Piéron as a section of an equilateral hyperbola, has found the same type of law, but with a reducible margin clearly less intense, which seems due to the greater rapidity of cutaneous depression permitted by the method when compared with the method of needle excitation employed by Piéron. The author has also made repeated excitations (1000 excitations per sec.). He has found that for a given physical intensity the time of reaction is always more rapid with the repeated than with the simple excitation, save at great intensities, where the two values fuse. The threshold, how-

ever, is finer in the first case than in the second.—*Math. H. Piéron* (Sorbonne).

1312. Fladeland, S. V. Speech defects of blind children. *Teach. Forum (Blind)*, 1930, 3, 6-8.—A brief classification and description of the more prevalent disorders of speech of the blind. A speech survey showed that about half of the children in three schools for the blind had major or minor speech defects—a much larger proportion than in seeing children. The author gave corrective speech training to 125 blind children and found that their speech defects could usually be removed or improved. The author points out that defective speech is an educational, a social, and an economic handicap; that children having speech defects become nervous and self-conscious; that these children often develop fear and inferiority complexes and other serious symptoms of emotional instability; and that since blind people must do things better than seeing people in order to win the confidence of the world, all additional handicaps such as defective speech should be removed.—*S. D. Robbins* (Boston).

1313. Granit, R. Interaction between distant areas in the human eye. *J. Physiol.*, 1930, 69, *Proc. Physiol. Soc.*, xvii.—The fusion frequency for four circular test patches separated by an unstimulated area has been measured for all the patches in turn, and all together. In peripheral vision there is a greater fusion frequency for all the patches together, showing physiological irradiation; but in central vision the interaction is very slight.—*G. C. Grindley* (Cambridge, England).

1314. Greider, C. E., & Downes, A. C. Sunlight—natural and synthetic. *Trans. Illum. Eng. Soc.*, 1930, 25, 378-391.—Comparison of solar radiation with that of a cerium cored flame carbon arc show that a 12-ampere arc resembles natural sunshine more closely than one of higher amperage.—*M. N. Crook* (Dartmouth).

1315. Grindley, G. C. The relation between the rod and cone mechanisms in the after effect of seen movement. *J. Physiol.*, 1930, 69, 53-59.—Experiments were made to test Granit's theory that rod and cone mechanisms inhibit each other in the after-effect of seen movement. The after-effect in red light was compared with that in other lights, and it was assumed that red light stimulates only the cones. No evidence of inhibition was found.—*G. C. Grindley* (Cambridge, England).

1316. Gunnison, P. The psychology of interest in modern lighting. *Trans. Illum. Eng. Soc.*, 1930, 25, 443-445.—*M. N. Crook* (Dartmouth).

1317. Hermann, W. Ueber die wissenschaftliche Bedeutung der Kongruenz und Inkongruenz der Gesichtsfelddefekte. (The scientific interpretation of congruence and incongruence in defects of the visual fields.) *J. f. Psychol. u. Neur.*, 1930, 40, 133-146.—*H. Marshall* (Stanford).

1318. Judd, D. B. The mixture data embodied in the tentative curves of Hecht's theory of vision. *J. Opt. Soc. Amer.*, 1930, 20, 647-660.—The curves proposed by Hecht are transformed to the color primaries of the O. S. A. "excitation" curves and shown to be

markedly different. Since Hecht (IV: 2893) has concluded from another method of comparison that these two sets of curves are expressions of practically the same color-mixture data, it follows that Hecht's method of comparison is inadequate. This finding does not disprove Hecht's extension of the Young-Helmholtz theory; it merely shows the first tentatively proposed set of curves to be unacceptable.—*D. B. Judd* (Bureau of Standards).

1319. Kucharski, P. Nouvelles expériences sur les facteurs déterminants de la sensation tonale. (New investigations of the determining factors of tonal sensation.) *C. r. Soc. biol.*, 1930, 104, 1249-1252.—In a series of previous researches the author has shown that a single vibratory period suffices to produce an auditory impression in which one may recognize the quality of pitch. From this one may conclude that the tonal sensation is not a function of frequency in the sense of repetition, but depends upon the duration proper of the vibratory period. It was in order to verify the exact behavior of these two factors that the present researches were undertaken with a new apparatus from which were secured oscillograms showing the time, the duration, and the form of the current which generated the sound and of the vibration of a telephone membrane.—*Math. H. Piéron* (Sorbonne).

1320. Lagrange, H. L'amblyopie crépusculaire. (Twilight amblyopia.) Paris: Doin, 1930. Pp. 176. 60 fr.—Twilight amblyopia is an epidemic disease attributable particularly to deprivation and often associated with scurvy. It is the retention upon the membranes of the eye of an organic deposit. There are also hereditary forms of the disease, and this book reviews the material on this question. There are two distinct mechanisms in twilight amblyopia: in one the trouble lies with the retinal layer (rods and cones, purple and pigmented layer); in the other a reflex mechanism is involved in which the centrifugal fibers of the optic nerve and the amacrine cells seem to be the efferent path. In this case the differential light sense is affected as well as the ability for adaptation to differences of brightness. The work contains three parts. In the first, normal and pathological physiology, the author studies retinal adaptation and some other factors necessary for twilight vision, and he touches upon the syndrome of twilight amblyopia. In the second part the author analyzes the etiology of the disorder. The third part is addressed to physicians. A bibliography of 500 titles.—*Math. H. Piéron* (Sorbonne).

1321. Leriche, —. Du rôle du bout périphérique d'un nerf sectionné dans la genèse de certains syndromes douloureux. (The rôle of the peripheral end of a sectioned nerve in the genesis of certain painful syndromes.) *Presse méd.*, 1930, 38, 777-779.—When a nerve has been cut for a long time and when its two ends have been widely separated for some years, it is certain that the nerve is no longer a conductor. Nevertheless the author reports two patients with whom he has obtained, by an infiltration of the indifferent conductor with an anesthetic, a modification of the peripheral circulation and the disappearance of the pain. In the two cases after the

operation electrical stimulation of the inferior end of the nerve has led to severe pain and to vaso-constriction. The author admits that the normal anastomoses of the peripheral end of the sectioned nerve with the neighboring nerves have been preserved intact in the trunk, apparently purely neurologically, and that their centripetal fibers are chronically excited by the abnormal condition of the neuroglia itself.—*Math. H. Piéron* (Sorbonne).

1322. *Leriche, R.* Le paradoxe de la sensibilité osseuse. (The paradox of osseous sensitivity.) *Presse méd.*, 1930, 38, 1059-1060.—An intra-haversial, intra-osseous sensitivity definitely exists which comes into play only with strong stimulation, congestion in a closed intra-haversial region, or post-fractural injury. This sensitivity is expressed by excruciatingly painful sensations and by contractions.—*Math. H. Piéron* (Sorbonne).

1323. *Luckiesh, M., & Moss, F. K.* The new science of seeing. *Trans. Illum. Eng. Soc.*, 1930, 25, 15-39.—"Seeing is the result of a partnership of lighting and vision." A large amount of knowledge is available in both these fields, but "relatively little has been accomplished in the development of the partnership." The authors present systematic glimpses of the results of scientific investigations which aim to show that this new science of seeing is in the making.—*M. N. Crook* (Dartmouth).

1324. *Luckiesh, M.* Stimulating sunlight. *Trans. Illum. Eng. Soc.*, 1930, 25, 397-405.—Various ways of simulating sunlight for purposes of health and visual comfort are described, particularly a new tungsten filament mercury vapor lamp.—*M. N. Crook* (Dartmouth).

1325. *Lythgoe, R. J., & Tansley, K.* The relation of the critical frequency of flicker to the adaptation of the eye. *Proc. Roy. Soc. Lond. (B)*, 1929, 105, 60-92.—The critical frequency of flicker was measured for the fovea and the peripheral retina under various conditions of light and dark adaptation and brightness of the test patch and its surroundings. It was concluded that the critical frequency due to the cones falls during dark adaptation, and is highest when the surroundings and test patch are equally bright; but the critical frequency of the rods rises during dark adaptation, and is highest with completely dark surroundings. The brightness of the surroundings is the chief factor in determining whether the critical frequency relations are of the rod or cone type; bright surroundings favor the cones, dark surroundings the rods, and intermediate illuminations partly the rods and partly the cones. It was deduced that the peripheral cones are functionally not identical with the foveal cones. The Ferry-Porter law was found to hold only under special conditions.—*M. D. Vernon* (Cambridge, England).

1326. *Macewicz, P.* O niektórych metodach badania t. zw. miary wzrokowej. (Some methods of examining "visual measurement.") *Kwartalnik psychol.*, 1930, 1, 381-423.—An analysis of the numerical results obtained from investigating the ability to estimate visually the magnitude and relative

positions of geometric figures.—*T. M. Abel* (Sarah Lawrence).

1327. *Rey, A.* Contribution à l'illusion de poids chez les anormaux. (Contribution to the study of the illusion of weight with abnormal subjects.) *Arch. de psychol.*, 1930, 22, 285-297.—It was the author's intention to measure the magnitude rather than the frequency of the illusion of weight, using 38 abnormal subjects between 7 and 15 years of age, and to compare the obtained values with those of 31 normal children 7-14 years old and 18 children 5-6 years old. Claparède's three cubes were used, the cubes being of equal weight but of different volume. The author then added weights of 50 grams to the largest cube until it was felt as heavier than the small cube or the middle cube. The total added weight measured the magnitude of the illusion. In the course of these experiments some individuals presented a reversed illusion or the absence of an illusion, most of these being among the abnormal cases and those of 5-6 years. Tables present the values obtained for each individual and graphs represent frequency curves of the magnitude of the illusion measured in grams. The modes obtained for the illusion between the large and small boxes were 150 grams for the abnormals of 7-15 years and the normals of 5-6 years, and 350 grams for the normals of 7-14 years. Some adults knowing the illusion have nevertheless given an illusion of 200 grams. The difference between the different groups of individuals is clear. After referring to the investigations of Flournoy, Claparède, Friedländer, and others the author agrees that an entirely satisfactory explanation of the phenomenon cannot be given at present.—*M. R. Lambercier* (Geneva).

1328. *Roaf, H. E.* Visual acuity in light of different colours. *Proc. Roy. Soc. Lond. (B)*, 1930, 106, 276-292.—Visual acuity was shown to be less with light of short wave length (blue) than with light of medium and long wave length (green and red). It seemed probable that the relatively poor acuity in blue light was not due to physical factors such as relative intensity and chromatic aberration, but to a lesser density of the specific receptors for blue light per unit retinal area, which resulted from either (1) the existence of color filters in front of these receptors, or (2) the linking of a number of rods to a single ganglion cell, while there is a separate ganglion cell for each cone. It seemed likely that the rods were responsible for short wave length reception.—*M. D. Vernon* (Cambridge, England).

1329. *Slonimsky, N.* Absolute pitch. *Amer. Mercury*, 1930, 21, 244-247.—The author considers what constitutes absolute pitch. He holds that the frequency of its occurrence has been greatly exaggerated. The standard A varies, and has varied in the past by as much as a full fifth. The author claims that he has tested musicians for absolute pitch and found that none of them were able to name correctly four tones when the intervals were dissonant.—*J. T. Metcalf* (Vermont).

1330. *Söderbergh, G.* En liten fysiologisk defekt. (A minor physiological defect.) *Svenska läkart.*, 1930, 27, 1373-1376.—The writer, having noticed

during his medical practice that most individuals have only a very vague idea of certain members of their body, ran, for his own satisfaction, a series of simple experiments on the ability to tell (with eyes closed) which of the five toes was slightly pinched. The percentage of errors and the reaction-times show that the second, third, and fourth toes are almost invariably confused. There is more assurance about the big toe and the little toe, but here also errors occur. The topography of the middle toes is of little interest to the shoe-wearing man, while the big and little toe are more subject to wear and tear impressions.—*M. L. Reymeri* (Mooseheart Laboratory for Child Research).

1331. Stephens, E. G., & Wheeler, H. B. Linger longer lighting for the ballroom. *Trans. Illum. Eng. Soc.*, 1930, 25, 569-574.—The use of lighting in the creation of atmosphere is discussed.—*M. N. Crook* (Dartmouth).

1332. Stiles, W. S. The scattering theory of the effect of glare on the brightness difference threshold. *Proc. Roy. Soc. Lond. (B)*, 1929, 105, 131-146.—Though a certain amount of scattering of light does occur in the refractive media of the eye, it is shown that, as regards the effect of a point source of glare, the scattering theory is not in agreement with experimental results, and the observed rise in the brightness difference threshold under glare conditions is due to other causes.—*M. D. Vernon* (Cambridge, England).

1333. Taylor, A. H. The color of daylight. *Trans. Illum. Eng. Soc.*, 1930, 25, 154-160.—Averages of color temperature data for daylight under various conditions of season and weather are reported.—*M. N. Crook* (Dartmouth).

1334. Villey, P. The world of the blind; a psychological study. New York: Macmillan, 1930. Pp. 403. \$2.25.—Ever since the appearance, in 1914, of the original edition, *Le Monde des Aveugles*, this book has been recognized as one of the most important reference books on work for the blind. Its first appearance in English was in 1922, and the present edition is simply a reprint of that translation. The author, a noted blind professor of literature at the University of Caen, wrote this book in the hope that it might impress on the educated seeing person the inherent normality and effectiveness of the blind man's mind. For this reason he has taken pains to dispel popular illusions about the blind, such as their supposed ability to tell color by touch. The topics in this book cover most of those which have attracted special attention because of their practical or theoretical importance in the psychology of the blind: the value of different embossed systems in terms of the psychology of touch; the "obstacle sense" and space perception; possibilities of esthetic appreciation; the blind in society, etc. Frequent references to sources are given in the text and footnotes, but there is no bibliography.—*K. E. Maxfield* (New York City).

[See also abstracts 1295, 1292, 1297, 1353, 1360, 1373, 1382, 1406, 1641.]

FEELING AND EMOTION

1335. Barcroft, J. Some effects of emotion on the volume of the spleen. *J. Physiol.*, 1929, 68, 375-382.—Either mental anxiety or the smell, sound, sight or pursuance of a cat causes contraction of the spleen of a dog, which may persist for half an hour. Adrenalin and ephedrin also produce contraction.—*G. C. Grindley* (Cambridge, England).

1336. Dunlap, K. Color. *Amer. Mercury*, 1930, 21, 333-336.—Preferences for color are merely a matter of convention. They are established in many ways, often depending on such factors as the availability of certain dyes and pigments. Once established, custom and tradition tend to preserve these preferences after the reasons for their development have passed away. The author scouts the idea that colors have a physiological effect upon the individual, also the notion that certain colors ought to be liked.—*J. T. Metcalf* (Vermont).

1337. Gemelli, A. Emozioni e sentimenti. (Emotions and feelings.) *Riv. fil.*, 1930, 1-25.—The author comments upon the obscurity and incongruity of the terminology and conceptions of the affective life. In order better to understand the mechanism of the origin of the affective life the functional point of view is helpful. The various needs for the realization of vital equilibrium are manifested subjectively in conscious inclinations. In its turn inclination reveals itself by acts or movements athwart the affective states. Affective states may be divided into elementary and superior feelings or into subjective and objective feelings. The author points out that the static theories of feeling are defective because they neglect the instinctive element which is present. One must find the true cause of an affective state in the complex biological constitution of the particular instincts. This conception makes possible the explanation of individual variations and shows how the affective processes exercise upon life the function of guide and sanctioner of action. This conception makes possible the clarification of the whole mechanism of the affective life. According to the author emotions are the phenomena which appear when adaptations are disturbed or interrupted.—*M. Ponso* (Turin).

1338. Gemelli, A. Emozioni e sentimenti. (Emotions and feelings.) *Riv. psicol.*, 1930, 24, 95-104; 157-171.—A functional interpretation of affective states as regulators of equilibrium. The author illustrates and discusses the particular characteristics of two fundamental categories, the inferior and objective (affective sensations) and the superior and subjective (sentiments), that color the whole of psychic life.—*T. M. Abel* (Sarah Lawrence).

1339. Joussain, A. Les sentiments et l'intelligence. (Feelings and intelligence.) Paris: Flammarion, 1930. Pp. 308. 12 frs.—Intelligence is subordinate to feeling, which directs it. The author defines the feelings as affective states which engender an active disposition and thereby serve as incentives of intellectual life. Feeling is envisaged as the source of intelligence, the author regarding as inexact the opinion of Malebranche that intelligence is objective and feeling subjective. Passing in review the progress of perception to thought and the gene-

sis of intelligence, the author studies the influence of feeling upon thought, of thought upon feeling, individual intelligence in its relation to individual sensibility, the logic of thought which has become feeling, and the retardation of thought by feeling. The second part of the book is devoted to the rôle of intelligence and feeling in social life (constant conditions of social life, genesis and evolution of morals and law and of religion and science, organization of societies, deep-rooted feelings dominating social life, currents and generations, institutions and customs, the élite and the masses). No bibliography.—*Math. H. Piéron* (Sorbonne).

1340. Maccurdy, J. T. The biological significance of blushing and shame. *Brit. J. Psychol.*, 1930, 21, 174-182.—The paper opens with a brief reference to the contributions of earlier workers in this field, e.g., Darwin, Havelock Ellis, Rivers, Cannon, Partridge and Stanley Hall. It is argued that the behavior in man accompanying the emotion of shame represents what would be at the primitive level an instinctive seeking for cover. The animal's immobility method of obtaining cover turns in man to hiding, and the physiology of blushing and the behavior of shame are identified at primitive levels. Savage man seeks concealment for activities the exercise of which expose him to danger in a hostile environment, e.g., eating, sleeping, sexual intercourse and excretion. Publicity in the indulgence of any of these, therefore, arouses shame. For modern civilized man security in the exercise of the first two activities has been secured, therefore but little shame persists in connection with them. The persistence under modern conditions of an over-determined shame concerning sex, and as an extension from this, concerning excretion, is due to modesty, the biological significance of which is well known. The appearance of shame in connection with activities or practices neither sexual nor potentially dangerous results from the functioning of symbolism. This interpretation is based upon the assumption that if an adapted instinctive response is toward immobility its involuntary accompaniments should represent a paralysis of the sympathetic and a stimulation of the vagal system.—*M. Drury-Smith* (Cambridge, England).

1341. Montassut, M., Delaville, M., & Russell, M. Emotivité, potassium et calcium plasmatiques. (Emotivity, potassium and plasmatic calcium.) *Enceph.*, 1930, 25, 471-474.—During a study of neurasthenic fatigue the authors remarked the influence of emotion upon the paradoxical rhythm of the sensation of fatigue. This latter decreases in the morning under the influence of imperative excitations or of agreeable solicitations; it reappears during the day, most often with a certain latency after lively emotions or painful impressions. The researches of these authors indicate that emotivity is related to the constant augmentation of plasmatic potassium, whose value is a function of the intensity of the emotional manifestations. The value of the calcium is less characteristic, being subject to large variations.—*Math. H. Piéron* (Sorbonne).

1342. Puca, A. Alterazioni bio-serologiche nelle scosse emozionali. (Bio-serological alterations in

emotional shocks.) *Riv. psicol.*, 1930, 24, 109-115.—The author studies the biochemical components of emotional shock and seeks to interpret protracted post-emotional syndromes in terms of certain bio-serological patterns.—*T. M. Abel* (Sarah Lawrence).

1343. Rackley, L. E. The blood pressure and galvanic reflex as indicators of emotional states. *J. Appl. Psychol.*, 1930, 14, 497-504.—"The present study seems to warrant the following conclusions: 1. That b p [blood pressure] changes and g r [galvanic reflex] changes indicate the presence of emotional states. 2. That fear-producing stimuli cause a greater change in b p and g r than mental work. 3. There is a positive relationship between the b p and the g r results, but this relationship is not great." As subjects, 5 boys and 5 girls were used, aged 13-17.—*G. L. Barclay* (Syracuse).

1344. Ruckmick, C. A. Emotions in terms of the galvanometric technique. *Brit. J. Psychol.*, 1930, 21, 149-159.—This paper re-emphasizes the writer's earlier protest against the assumption that the considerable and widespread bodily disturbances accompanying emotional experiences are themselves equivalent to the emotional experiences, and not in part at least "livable experiences in the human mind and probably also in the mind of other higher vertebrates." He explains the effect of this outlook upon his attitude to much of the work done in connection with the emotions by means of galvanic records. A review is given of the work done on this problem in the University of Iowa laboratories, and elsewhere. The writer concludes that when adequately safeguarded against both uncontrolled conditions in the body extraneous to the emotional situation, and against fortuitous factors in the electrodes, the galvanic reflex offers the possibility of a promising approach to the quantitative and graphic analysis of the emotional life. This type of experimentation should, he thinks, always be accompanied by the subjects' careful and analytical descriptions of their experiences during even the most intense emotional crises. There is at Iowa a means of recording graphically the temporal course of an emotional process with its intensity closely corresponding to the amount of variation in bodily resistance.—*M. Drury-Smith* (Cambridge, England).

[See also abstracts 1363, 1395, 1450, 1457, 1660, 1706.]

ATTENTION, MEMORY AND THOUGHT

1345. Allport, G. W. Change and decay in the visual memory image. *Brit. J. Psychol.*, 1930, 21, 133-148.—This paper examines the characteristic lines of change and decay in the visual memory images of children. Theoretically, its interest lies mainly in the bearing of its findings upon the law of *Prägnanz*, which according to the Gestalt school is the most general law of memory. The discussion is preceded by a comparative account of the writer's methods and those used earlier by Wulf and Gibson. Allport tested 275 children. Changes in their reproductions of the Binet (X3) designs after intervals of two weeks and of four months, as well as immediately after the exposure, indicated that some

alterations which occurred during the period of retention were typical in certain respects. In general the images tended to become smaller, simpler and more symmetrical. The number of the designs, however, was correctly retained, also their essential shapes, though there were many variations in respect to detail. These Allport classes under the term "sharpening" or "levelling" of special features. His conclusion is that though very few of the figures are perfectly retained they do not, in general, disintegrate or lose their identifiability. The hypothesis drawn from these results is that there are dynamic processes in the brain which during retention force memory traces into typical lines of change; Allport does not, however, consider that it is justifiable to state that these processes lead inevitably to "goodness" in the image. In his opinion the concept of *Prägnanz* can be defined only in terms of lists of specific tendencies and the conditions for their occurrence; the same holds good of the laws of the phenomenology of the memory image.—*M. Drury-Smith* (Cambridge, England).

1346. Arnstein, E. Ueber das Vorstellen räumlicher Gebilde. (The representation of spatial structures.) *Zsch. f. angew. Psychol.*, 1930, 37, 460-484.—The Hamburg stereometric test-series, a modification of Yerkes' block pictures, was given to 197 Palestinian Jewish school children with an age range from 9 to 17. Since the test differentiated the ages clearly, the author considers it a satisfactory developmental measure. Boys uniformly excelled girls in both speed and accuracy. Solutions were reached almost exclusively through spatial representation by the younger pupils and by means of calculation with the older children. Typical errors were: (1) counting only the visible cubes; (2) including only the number of visible surfaces; (3) limiting total to surfaces of a given illumination. The number of cubes in the picture is a primary determinant of the difficulty of each item. Author stresses the fact that children who worked logically required more time than those visually endowed. Since the r between average school marks and test rank was low positive, the conclusion is drawn that the test measures a capacity not considered in the ordinary intelligence scales.—*G. W. Hartmann* (Berlin).

1347. Laird, J. Knowledge, belief and opinion. New York: Century, 1930. Pp. xi + 515. \$4.00.—The author claims that the examination of human cogitative powers is possible. However, they cannot be studied *in vacuo*, but only when cogitating objects. Since objects exist as such something intervenes when cognition takes place, and studying this is epistemology. The examination of knowledge, belief and opinion leads to the conclusion that these powers differ in degree of conviction and amount of evidence. Knowledge is conscious correct apprehension or fully evidenced conviction, and belief is conviction not fully evidenced. "The man who only believes, 'does not know.'" Belief implies psychological conviction and assent (in various degrees) while opinion inclines us to assent but does not necessitate it. Opinion is not merely consistent with itself and the evidence, but may also be that which does

not seem to be inconsistent with itself and the evidence. Knowledge (certainty) in the old sense, is not possible. There may be reasonable beliefs and opinions which are not "quite" certain knowledge. Probability allows for all degrees of evidence. Here the term "presumption" is substituted for the general meaning of "probability," since a narrower and more specialized meaning has developed for the latter term, viz., it is a precise enumeration of what is certain followed by a statement of the chances against the particular event. A survey is then made of the commonly accepted certainties: (1) the highly formal and the very general, and (2) the particular and concrete. These consist of logical and inferential certainty on the one hand and certainties in mathematics, ethics, sense, memory, etc., on the other. These certainties are then seen to be rational presumptions dependent upon our orientation or preconceptions. Preconceptions are the structure or drift of argument along which the mind proceeds. Our preconceptions we consider "scientific," as opposed to the preconceptions of the primitive mind, which we call "magic." The preconceptions of (1) continuity, (2) stability, (3) natural regularity, and (4) system seem to be the generalizations accepted concerning the nature of things and the universe. These are also rational presumptions. "The natural sciences adopt the policy of pursuing a ground-plan suggested in experience so long as success, that is to say empirical confirmation, seems probable. This policy is a very different thing from any final belief in the omniscience of 'mechanical,' 'materialistic,' or even 'spiritual' and 'idealistic' interpretations of the universe." The above statement of the author's viewpoint is developed through a consideration of the philosophies of Locke, Hume and Kant in particular, and of special points from a number of modern writers. The book ends with a number of reading suggestions.—*E. B. Heim* (Provo, Utah).

1348. Roggero, E. Come devo educare la mia memoria? (How can I train my memory?) Milan: Hoepli, 1929. Pp. 184.—In the first part the author studies the nature of memory, the advantages which man has in virtue of his excellent mnemonic endowment, the memory of animals, and the "storehouse of memory." In the second part the author outlines the different systems of mnemotechnics and gives his own counsels.—*V. D'Agostino* (Turin).

1349. Rubinstein, P. Untersuchungen über die individuelle Übungsfähigkeiten bei Funktionen verschiedener Höhe. (Individual practice effects in functions of varying complexity.) *Zsch. f. angew. Psychol.*, 1930, 37, 417-437.—Do the practice curves of the same individual show a similarity in form for different functional complexes? The author arranged reaction-time situations of four levels of difficulty. Four colored exposition figures of similar but not identical pattern were used as stimuli; the motor reaction in all cases consisted in pressing the key or inhibiting the response. The difficulty stages (of choice, discrimination, coordination, transposition) were produced by complicating the central components. In the simplest situation, the subject had only to choose between two alternatives, while in

the hardest eighteen possibilities were present. Practice on a higher level was undertaken only after a plateau had been reached on a lower. Among 30 subjects, two distinct reaction profiles appeared, based on the relation existing between speed and accuracy in each case. In the *tempo-plastic* type, the time required increased with the advancing complexity of performance but the number of errors remained relatively stable; with the *tempo-inert* type, however, the time was relatively unchanged, but a systematic increase in mistakes appeared. These traits were true for both higher and lower functions. The author sees in these findings problems of fundamental importance for individual prognosis in vocational guidance.—G. W. Hartmann (Berlin).

1350. Schjelderup-Ebbe, T. Zur Psychologie der Zahleneindrücke. (On the psychology of number images.) *Kwartalnik psychol.*, 1930, 1, 365-380.—Our images of number are not haphazard but are organized as are other types of images into patterns which are determined subjectively by our particular modes of thought and objectively by the fact that numbers are parts of a system wherein each part has a definite relation to the whole.—T. M. Abel (Sarah Lawrence).

[See also abstracts 1284, 1649, 1736.]

NERVOUS SYSTEM

1351. Adrian, E. D. Impulses in sympathetic fibres and in slow afferent fibres. *J. Physiol.*, 1930, 70, *Proc. Physiol. Soc.* xx-xxi.—Records of slowly conducted impulses in sympathetic nerves and in cutaneous sensory nerves in the cat and frog are shown. In the frog they may be produced by acid on the skin.—G. C. Grindley (Cambridge, England).

1352. Adrian, E. D., & Bronk, D. W. The discharge of impulses in motor nerve fibres. Part I. Impulses in single fibres of the phrenic nerve. *J. Physiol.*, 1928, 68, 81-101.—The frequency of the impulses in individual fibers of the phrenic nerve (in the cat or rabbit) varies from about 20-30 per second in normal breathing, to about 80 per second in forcible inspiration. Variations in the amount of contraction of the diaphragm are due to variations in the frequency of the discharge of all the fibers of the phrenic nerve rather than to variations in the number of fibers involved. The motor cells discharge almost in unison at high intensities, producing well synchronized volleys of impulses in the whole nerve; but at lower intensities the synchronization is not so accurate.—G. C. Grindley (Cambridge, England).

1353. Adrian, E. D., & Umrath, K. The impulse discharge from the Pacinian corpuscle. *J. Physiol.*, 1929, 68, 139-154.—Pacinian corpuscles in and around the flexor tendon of the cat's toe give sensory discharges when stimulated mechanically, but not when stimulated thermally. The discharge is of the usual kind, the frequency being from about 5 to 100 per second for moderate stimulation, and it shows rapid decrease of frequency (adaptation) to continued stimulation. Flexion of the toe or external pressure acts as a stimulus. The similarity of the discharge in nerves from different kinds of sense

organs and in motor nerves is discussed.—G. C. Grindley (Cambridge, England).

1354. Amberton, W. R., & Downing, A. G. The electric response of nerve to two stimuli. *J. Physiol.*, 1929, 68, 1-18.—Evidence is given that a nerve fiber does not recover completely from the conduction of an impulse for about 100 μ ; if two stimuli are given with a smaller time interval, the second impulse is not maximal. CO₂ prolongs the absolute refractory period and the time of recovery.—G. C. Grindley (Cambridge, England).

1355. Amberton, W. R., & Downing, A. G. On the form of the action potential wave in nerve. *J. Physiol.*, 1929, 68, 19-38.—A single action potential wave (in the sciatic nerve of the frog) is followed by a retention of negativity for about 0.5-1 sec., succeeded by an after-positivity lasting about 3-5 sec., which is sometimes followed by a weak negativity. When two impulses follow each other at short intervals their after-effects are incompletely summated.—G. C. Grindley (Cambridge, England).

1356. Beattie, J., Brow, G. R., & Long, C. N. H. Physiological and anatomical evidence for the existence of nerve tracts connecting the hypothalamus with spinal sympathetic centers. *Proc. Roy. Soc. Lond. (B)*, 1930, 106, 253-275.—Previous work had shown that upon the proper functioning of a number of nuclei in the hypothalamus were more or less dependent many functions of the sympathetic nervous system, such as temperature regulation, pilomotor and ocular phenomena, and the secretion of adrenalin. This paper shows that cardiac irregularities are set up by breaking the connection between the hypothalamus and the spinal cord. The sympathetic phenomena of certain emotional states also appear to be initiated and controlled by the activity of the hypothalamus.—M. D. Vernon (Cambridge, England).

1357. Berger, H. Ueber das Elektrenkephalogramm des Menschen. (Electroencephalography in man.) *J. f. Psychol. u. Neur.*, 1930, 40, 160-179.—The author has been able to obtain records on 76 individuals who have defects in the bony structure of the skull (mostly operative), through which it is possible to introduce electrodes. In all he has accumulated 1133 curves, roughly comparable to those from electrocardiograph records, on which he hopes to base further work.—H. Marshall (Stanford).

1358. Bremer, F., & Homes, G. Interprétation théorique de la sommation d'influx nerveux. (Theoretical interpretation of the summation of nervous impulses.) *C. r. Soc. biol.*, 1930, 104, 800-809.—The authors propose to formulate mathematically the variation of the two components assumed in latent addition (two quantities of excitation varying with the interval, the quantity of residual excitation at the moment of the second impulse and the quantity produced by this second impulse) as a function of the interval of two volleys of impulses; and to compare with the experimental curves the theoretical curves constructed according to this hypothesis. The summation curves constructed theoretically on the hypothesis that the latent addition of the impulse is like a summation of subliminal electric stimuli follow

closely the characteristics of the experimental summation curves.—*Math. H. Piéron* (Sorbonne).

1359. Bremer, F. *Nouvelles recherches sur la sommation centrale.* (New investigations on central summation.) *C. r. Soc. biol.*, 1930, 104, 810-814.—The author has found in the curves of summation for the homolateral spinal reflex of the frog, contrary to the case with man, some curves presenting a second delayed optimum. This second optimum is not the result of the delayed arrival at the reflex center of impulses from the cervical centers of the cord (the curves can be secured from a cord reduced to the lumbar-sacral segments). It is not the expression of a reverberation towards the cord of proprioceptive impulses of muscular origin; nor is it explained by the heterogeneity of the excited afferent fibers. The author explains the fact by supposing the existence in the center of the homolateral spinal reflex of two kinds of paths of unequal complexity, both ending at the same group of motor neurons. The delayed optimum would be the result of the participation in the reflex of the most complex paths, each of which includes two intercalary neurons, that is, one more than the direct paths. The summation of the two successive impulses would take place only beyond the first intercalary neuron. This neuron, after having been traversed by the first impulse, would not be excitable again until after the termination of its absolute refractory period, which is supposed to be long.—*Math. H. Piéron* (Sorbonne).

1360. Bronk, D. W. The action of strychnine on sensory end organs in muscle and skin of the frog. *J. Physiol.*, 1929, 67, 17-25.—The frequency of sensory impulses from a stretched muscle and from the pressure end organs in the skin of the frog was measured before and after the application of strychnine. In the muscle, strychnine reduced the frequency of impulses, and caused more rapid adaptation of the end organs. In the skin, strychnine produced a small increase of the response frequency at low concentrations, and a decrease at higher concentrations. It therefore appears that strychnine does not act on these end organs in the same way as it acts on the central nervous system.—*G. C. Grindley* (Cambridge, England).

1361. Brouwer, B. Ueber die Projektion der Makula auf die Area striata des Menschen. (The projection of the macula toward the area striata in man.) *J. f. Psychol. u. Neur.*, 1930, 40, 147-159.—*H. Marshall* (Stanford).

1362. Cooper, S., & Denny-Brown, D. The interaction between two trains of impulses converging on the same motor neurone. *Proc. Roy. Soc. Lond. (B)*, 1929, 105, 363-371.—When two afferent paths converge to cause excitation of the same motor unit, each path is separated by an irreversibly conducting junction from that unit and from the other path. If two afferent stimuli are so combined that the second stimulus is completely occluded by the first, the electrical response shows that the second stimulus affects the motor unit even when no further mechanical contraction occurs. There is evidence that this second propagated disturbance can take effect immediately the peripheral "least interval" after a

previous disturbance has passed, and that the disturbance is deferred at the locus of convergence of the afferent paths.—*M. D. Vernon* (Cambridge, England).

1363. Fulton, J. F., & Ingraham, F. D. Emotional disturbances following experimental lesions of the base of the brain (pre-chiasmal). *J. Physiol.*, 1929, 67, *Proc. Physiol. Soc.*, xxvii-xxviii.—After an operation believed to have cut the fibers from the frontal lobes to the hypothalamus, several cats developed a state of "chronic rage, i.e., a condition in which rage is much more easily elicited than in a normal animal"—*G. C. Grindley* (Cambridge, England).

1364. Prezzolini, M. Misura dell' eccitabilità nervosa agli stimoli elettrici. Cronaxi del nervo vestibolare. (The measure of nerve excitability for electric stimuli. Chronaxy of the vestibular nerve.) *Bull. sci. med. Bologna*, 1930, 102, No. 3.—The author recalls the principal advantages of the measure of chronaxy for classical electro-diagnosis and presents the facts which show the practical and scientific interest of the new method, which shows that muscular atrophy ex inertia belongs to the category of pathophysiological atrophy. Vestibular chronaxy methods are so sensitive that one may not accept them if the response is abnormal; but if the response of the experiment is normal, one may have the greatest certainty.—*G. C. Ferrari* (Bologna).

1365. Schob, F. Totale Erweichung beider Grosshirnhemisphären bei einem zwei Monate alten Säugling. (Complete softening of both hemispheres of the cerebrum in a two months old nursing.) *J. f. Psychol. u. Neur.*, 1930, 40, 365-381.—*H. Marshall* (Stanford).

1366. Sherrington, C. S. Some functional properties attaching to convergence. *Proc. Roy. Soc. Lond. (B)*, 1929, 105, 332-362.—A review of recent work on the various kinds of interaction of excitatory and inhibitory processes in reflex action involving the stimulation of more than one afferent.—*G. C. Grindley* (Cambridge, England).

1367. Simkins, C. S. The physical basis of intelligence. *Scient. Mo.*, 1930, 31, 517-523.—Not size nor surface characteristics of the brain, but the neurons of the supragranular cortex, furnish the physical basis of intelligence.—*J. F. Dashiell* (North Carolina).

1368. [Various.] What is known about brain patterns. *Bull. Cartesian Res., Bio-psychol.*, 1930, Pp. xxiv + 33.—Re-issue of No. 2, 1925 and 1926.—*R. R. Willoughby* (Clark).

[See also abstracts 1372, 1379, 1381, 1401, 1499.]

MOTOR PHENOMENA AND ACTION

1369. Barcroft, J., & Robinson, C. S. A study of some factors influencing intestinal movement. *J. Physiol.*, 1929, 67, 211-220.—Even when empty of food the small intestine (of the dog) is fairly active, displaying all the types of movement observed when food is passing through. Exercise, emotion and sleep had no noticeable effect on the movements.—*G. C. Grindley* (Cambridge, England).

1370. Besterman, T. Library catalogue (supplement) 1928-1929. *Proc. Soc. Psych. Res.*, 1929 (December).—To correct IV: 4261.—R. R. Willoughby (Clark).

1371. Bousfield, W. A. A study of motor skill in the free hand duplication of geometrical figures. *J. Appl. Psychol.*, 1930, 14, 478-485.—Performance of 90 boys and girls in 4th and 5th grades on duplication of 12 simple geometrical figures showed low positive correlation with mental ability (measured by Otis Classification Test), superiority of 5th over 4th grade children, and a slight superiority of girls over boys. (No data are given comparing intelligence scores of boys with girls in this group.) Bibliography of 18 titles.—G. L. Barclay (Syracuse).

1372. Briscoe, G., & Leyshon, W. Reciprocal contraction of antagonistic muscles in peripheral preparations, using neon-lamp circuit for the excitation of nerve. *Proc. Roy. Soc. Lond. (B)*, 1929, 105, 259-279.—Smooth and regular limb movement, closely resembling natural movement, was obtained by supplying the respective nerves of opposing muscles with graded stimuli bearing an approximately reciprocal relation to each other. Controlled relaxation of a muscle during the mounting phase of its opponent by the graded elimination of energy units was shown, as well as controlled contraction by the graded addition of units. Posture was as readily produced as coordinated movement. These results support the theory of reciprocal contraction in antagonistic muscles.—M. D. Vernon (Cambridge, England).

1373. Bronk, D. W. Fatigue of the sense organs in muscle. *J. Physiol.*, 1929, 67, 270-281.—The rapid adaptation of the sense organs in a muscle when the muscle is stretched is followed by a more gradual decrease in the frequency of their discharge, which is attributed to fatigue. Measurements of fatigue and recovery were made under various conditions.—G. C. Grindley (Cambridge, England).

1374. Bronk, D. W. The energy expended in maintaining a muscular contraction. *J. Physiol.*, 1930, 69, 306-315.—The economy of energy expenditure (tension-time per unit of heat produced) has been measured for various frequencies of muscle stimulation. The economy increases with the frequency up to the point of tetanus, but then remains constant. A stimulation frequency not quite sufficient to give summation of twitches will, if continued, produce fused tetanus. Associated with this changed condition of the muscle there is greater economy. This factor may play an important rôle in long-sustained contractions where there is reason for expecting a decreased frequency of motor impulses.—G. C. Grindley (Cambridge, England).

1375. Clark, D. A. Muscle counts of motor units. *J. Physiol.*, 1930, 70, *Proc. Physiol. Soc.* xviii-xix.—M. soleus and M. extensor longus digitorum were taken as representative of slow "red" and rapid "white" muscle respectively; and it was found that in the former there were, on the average, 120 muscle fibers per motor unit (i.e., per nerve fiber), and in the latter 165. The maximum tension (tetanic) was 9.9 gm. and 8.6 gm. per motor unit respectively.—G. C. Grindley (Cambridge, England).

1376. Cooper, S. The relation of active to inactive fibers in fractional contraction of muscle. *J. Physiol.*, 1929, 67, 1-13.—In weak reflex contractions of the tenuissimus and sartorius muscles of the cat, evidence was found that a chain along the whole length of the muscle contracts; and that stronger contractions involve a greater number of such chains. If this were not so, energy would be wasted in stretching the inactive fibers. The tendon arrangements of muscle are discussed.—G. C. Grindley (Cambridge, England).

1377. Cooper, S., & Eccles, J. C. The isometric responses of mammalian muscles. *J. Physiol.*, 1930, 69, 377-385.—The ratio of maximum tetanus tension to twitch tension is greater for muscles of short contraction time. The relation between the rate of stimulation and the tetanus tension follows an S-shaped curve for all the muscles studied.—G. C. Grindley (Cambridge, England).

1378. Cornil, L., & Goldenforn, Z. Réflexes conditionnels ou réflexes associatifs? *Encéph.*, 1930, 25, 391-394.—The authors prefer the term *associative reflex*, as used by Bekhterev, to that of *conditioned reflex*, used by Pavlov. However, they consider the term *conditional associative reflex*, which unites the two qualifiers, to be preferable to either of the others.—Math. H. Piéron (Sorbonne).

1379. Creed, R. S., & Eccles, J. C. The incidence of central inhibition on restricted fields of motor units. *J. Physiol.*, 1928, 66, 109-120.—In a decerebrate cat, an inhibitory stimulus of constant weak intensity was pitted against an excitatory stimulus of graded intensity producing the flexion reflex. It was found that as the intensity of the excitatory stimulus was increased, the effect of the inhibitory stimulus, at first slight, became greater up to a point and then decreased. It is argued that this shows that the inhibition falls only on a fraction of the motor units of the flexion reflex, and that the excitation is falling on another (varying) fraction. With maximal stimulation it is likely that the inhibitory field of even a small afferent nerve includes the whole of a half-center, thereby differing from the excitatory field.—G. C. Grindley (Cambridge, England).

1380. Crockett, A. C. A measure of manual ability. *J. Appl. Psychol.*, 1930, 14, 414-426.—A test for manual ability was devised, having three parts: (1) screwing nuts onto bolts of various sizes, then placing the bolts in holes of corresponding size; (2) packing small wooden blocks into a box; (3) arranging rows of blocks on a narrow strip of wood. The test seems to measure a general factor in manual performances which may be called "manual ability," and which the author defines as "native expertness and grace in manual acts." Correlations of test scores with shop production of various sorts vary, but indicate "reasonable validity." Manual ability seems relatively unrelated to chronological or mental age and school achievement. Bibliography of 7 titles.—G. L. Barclay (Syracuse).

1381. Dale, H. H., & Gaddum, J. H. Reactions of de-nervated voluntary muscle and their bearing on the mode of action of parasympathetic and related nerves. *J. Physiol.*, 1930, 70, 109-144.—Evidence is

given that the vaso-dilator effects of para-sympathetic nerves and of sensory fibers stimulated antidromically, and the contractures of de-nervated muscles accompanying these actions, are due to the peripheral liberation of acetylcholine.—*G. C. Grindley* (Cambridge, England).

1382. De Almeida, M. O. Le rôle de la peau et des excitations cutanées dans le maintien du tonus musculaire. (The rôle of the skin and of cutaneous stimulations in the maintenance of muscle tonus.) *J. de physiol.*, 1930, 28, 17-30.—The author and Piéron have shown earlier that the skin plays a rôle of the first importance in the maintenance of tonus. The author, completing his researches, presents the principal experimental results obtained. He examines successively the mechanical supporting rôle of the frog's skin, the rôle of the skin in the maintenance of flexion-tonus in the frog, the rôle of the skin in other inferior animals, the spinal tonus of mammals, and decerebrate rigidity. From these experiments it follows that a given muscle tonus is not a reflex exclusively autogenic and proprioceptive. It is a more complicated phenomenon, varying somewhat with the species of animal and dependent upon several forms of stimulation, among which those from the skin are of first importance. A bibliography of 30 titles.—*Math. H. Piéron* (Sorbonne).

1383. Delhougne, A. Die Gefahr, von höchst wandelbaren Charakteren getäuscht zu werden. (The danger of being deceived by highly variable characters [in handwriting].) *Psychol. Rundschau*, 1930, 2, 238-244.—The article deals with the judgment of types of handwriting which have a sameness running through their variations. A single copy of one's writing fails to reveal the characteristic chiromography. Such variations are to be compared with those of facial expression. The same person under varying moods is still himself. The author aims to lead the reader to a search for the nature of the writer as revealed in his chiromography, the inner self; deplores the many fakirs that have given disrepute to graphology; and seeks an interest from the highly cultured for this field of understanding of human nature. The article is illustrated and an analysis cited of the writing of a youth with stealing tendencies.—*A. B. Herrig* (Michigan Central State Teachers College).

1384. Denny Brown, D. E., & Sherrington, C. S. Subliminal fringe in spinal flexion. *J. Physiol.*, 1928, 66, 175-180.—In the flexion reflex (in the hind limb of the cat) the simultaneous stimulation of two allied excitatory afferent nerves produces effects, shown by the myogram of the reflex, which indicate that the afferent impulses (when strong and maximal, as well as when weak) produce centrally a fringe of subliminal excitatory effect. A fringe, when once lifted above the threshold, may sometimes be maintained there by a stimulus which was previously subliminal.—*G. C. Grindley* (Cambridge, England).

1385. Denny Brown, D. On inhibition as a reflex accompaniment of the tendon jerk and of other forms of active muscular response. *Proc. Roy. Soc. Lond. (B)*, 1928, 103, 321-336.—The complete ab-

sence of action currents in the muscle during the tendon jerk is due to the synchronized afferent inhibitory impulses aroused by the excitation wave of the jerk; the latter stimulates the end organs in the muscle spindles.—*M. D. Vernon* (Cambridge, England).

1386. Denny Brown, D. On the nature of postural reflexes. *Proc. Roy. Soc. Lond. (B)*, 1928, 104, 252-301.—The motor discharge in postural reflexes is a slow repetitive impulse series, so that these reflexes are unusually resistant to fatigue. There is no satisfactory evidence that postural reflexes involve any other mechanism than the conventional muscular contraction in response to motor excitation. The stretch reflex forms the basis of postural reflexes and it is facilitated by other reflexes and by excitation derived from higher levels in the nervous system. The mechanism whereby a muscle which is passively stretched returns to its position of equilibrium is described.—*G. C. Grindley* (Cambridge, England).

1387. Dickinson, S. The efficiency of bicycle pedalling as affected by speed and load. *J. Physiol.*, 1929, 67, 243-255.—The mechanical efficiency of bicycle pedalling is greatest when the time of one pedal revolution is 1.8 sec., and the efficiency is not appreciably affected by changes of load (at the pedal) from 5 kg. to 26 kg. The results agree with A. V. Hill's theory.—*G. C. Grindley* (Cambridge, England).

1388. Eccles, J. C., & Granit, R. Crossed extensor reflexes and their interaction. *J. Physiol.*, 1929, 67, 97-118.—Measurements of recruitment, occlusion, facilitation and after-discharge were made in crossed extensor reflexes in the de-afferented preparation. Recruitment is often a very rapid process, and facilitation is more prominent than in flexor reflexes. Facilitation of one reflex by another may occur immediately (concurrent facilitation) or as an after-effect (sustained facilitation). The facilitating power of one weak reflex on another is not maximal until its recruitment is almost complete, and soon after this it diminishes, apparently owing to some fatigue process. There is therefore an optimum point of facilitation. Facilitation is accompanied by a shortened latent period. The site and nature of facilitation are discussed, and it is argued that the results support Sherrington's theory of an excitatory substance E.—*G. C. Grindley* (Cambridge, England).

1389. Eccles, J. C., & Sherrington, C. S. Reflex summation in the ipsilateral flexion reflex. *J. Physiol.*, 1930, 69, 1-28.—A single volley of impulses of threshold value is sent along one afferent nerve excitatory to a flexion reflex, and this is accompanied or followed at a varying interval by a similar volley along another afferent nerve excitatory to the same response. Summation is maximal when the impulses are simultaneous in some cases, and when they are separated by an interval of 120 in others. A single afferent volley appears to cause a complex central excitatory state which persists for some time and is capable of summation. It is argued that a single afferent impulse can never by itself

produce a threshold excitatory state in a motor neurone. Temporal or spatial summation (centrally) is necessary for every reflex discharge.—*G. C. Grindley* (Cambridge, England).

1390. Eccles, J. C., & Sherrington, C. S. Number and contraction-values of individual motor-units examined in some muscles of the limb. *Proc. Roy. Soc. Lond. (B)*, 1930, 106, 326-357.—Describes an investigation of the number, size and contraction-tension of the individual motor nerve fibers supplying each of four typical limb muscles. The wide range of diameter of the individual efferent fibers supplied by the ventral spinal root to each of the several muscles seems to show that the constituent motor units of each muscle differ much from each other in size.—*M. D. Vernon* (Cambridge, England).

1391. Finkleman, B. On the nature of inhibition in the intestine. *J. Physiol.*, 1930, 70, 145-157.—Evidence is given that the inhibitory nerves of plain muscle act by liberating peripherally an inhibitory substance.—*G. C. Grindley* (Cambridge, England).

1392. Fulton, J. F., Liddell, E. G. T., & Rioch, D. McK. The influence of unilateral destruction of the vestibular nuclei on posture and the knee jerk. *J. Physiol.*, 1930, 70, *Proc. Physiol. Soc.* xxii.—When the vestibular region of one side of the medulla (in the decerebrate cat) is destroyed, decerebrate rigidity on that side is diminished and reflexes such as the knee jerk become spinal in character, and highly susceptible to inhibition, while the stretch reflex is reduced or absent. "We conclude that the vestibular nuclei are essential for the maintenance of decerebrate rigidity, and that they normally exert their influence through control of the inhibibility of the lower spinal centres."—*G. C. Grindley* (Cambridge, England).

1393. Kendrew, E. N. A further attempt to measure the strength of instincts. *Brit. J. Psychol.*, 1930, 21, 160-173.—This paper describes an attempt to work out the idea of using a conative basis for the measurement of instincts. The test used was the piling up of dominoes one on top of the other; the subjects were demonstration-school children ranging in age from three to six years; the incentives in the order in which they were applied were: competition, food-seeking, curiosity, self-competition. The numerical results obtained were confirmed by examples of behavior, a change in the level of performance in each test being accompanied by a corresponding change in the amount of interest or effort shown by the children. The resultant weighted average scores were as follows: food-seeking, 31.4; curiosity, 26.6; competition, 25.7. (For self-competition no equivalent figure is available.) It was found that the food-seeking test was the only test in which nervousness and outside distractions evidently lowered the score, that the examples of behavior expressing interest and effort were more numerous throughout it, and that during it no instances at all were shown of behavior expressing lack of interest. The results from the competition test appeared to show that with young children the competitor is regarded as a companion rather than as an opponent. Bearing in mind the variety in the general type of behavior of

one child as compared with another (a variety probably the result of differences in temperament, together with such other factors as the pronounced differences in the methods of working and differences in age and intelligence) the group reactions noted in the course of the experiment are significant. In the opinion of the writer, they suggest that the incentive aroused some conative impulse common to the group of children, and that the ensuing behavior gave some indication of its strength.—*M. Drury-Smith* (Cambridge, England).

1394. Konorski, J., & Miller, S. L'influence des excitateurs absolus et conditionnels sur les réflexes conditionnels de l'analysateur. (The influence of primary and conditioned stimuli on the conditioned reflexes of the analyser.) *C. r. Soc. biol.*, 1930, 104, 911-913.—The authors studied the influence of stimuli on the conditioned reflex of the second type and on these same reflexes in a period of check.—*Math. H. Piéron* (Sorbonne).

1395. Languier des Bancelles, J. Les tendances affectives. (Affective tendencies.) *Rev. phil.*, 1930, 55, 176-229.—Historical summary of the problem. The author reviews in turn the classification of tendencies, instinctive tendencies, the instability of instincts, instinct and habit, desire, classification, human instincts, and the abortive emotions of instincts. Bibliography of 30 titles.—*Math. H. Piéron* (Sorbonne).

1396. Laugier, H. Indice physiologique de fatigabilité. (The physiological index of fatigability.) *Bull. Soc. clin. méd. ment.*, 1930, 23, 59-60.—The author gives the results of ergographic experiments permitting a differentiation of individuals from the point of view of repair of the neuro-muscular system during the course of work. These experiments were carried out on normal subjects, on patients affected with various neuro-psychiatric disorders, and on certain athletes at the Amsterdam Olympic games.—*Math. H. Piéron* (Sorbonne).

1397. Laugier, H., & Neoussikine, B. Diffusion de l'excitation dans les centres nerveux. Différences individuelles, rôle de la posture. (Diffusion of excitations in the neural centers. Individual differences and the rôle of posture.) *C. r. Soc. biol.*, 1930, 105, 437-439.—When one asks a subject to hold a weight of 50, 150, or 200 gms. with his extended index finger (the wrist resting upon a pad), keeping the weight at an indicated height for as long a time as possible, it is readily observable that there is a diffusion of motor excitation in the muscles of the forearm on the same side and in the extensor of the index of the homolateral fore-arm. This diffusion occurs differently in different individuals, and the facts seem to favor an hypothesis according to which the diffusion occurs after functional associations or purely temporal facilitations related to the momentary activities of neighboring centers. The initial posture of the other fingers of the hand sustaining the weight has a great influence upon the diffusion of the excitation. The focusing of excitations seems to be, to an important degree, conditioned by chronaxie relations between the neurons.—*Math. H. Piéron* (Sorbonne).

1398. Lugaro, E. *Reflessi propri dei muscoli e sinergie muscolari.* (Intrinsic muscular reflexes and muscle synergy.) *Riv. di pat. nerv. e ment.*, 1930, 35, 7-21.—Reflex activity is a function of motor and sensory nerve fibers, and the connection could involve two neurons and a single synapse. The author shows that even the crossed reflexes may be mono-synaptic by way of the collateral branches of the neuron.—G. C. Ferrari (Bologna).

1399. Magauda, P. *Sopra uno speciale modo di comportarsi della reazione pupillare alla luce in soggetti sifilitici.* (A special reaction of the pupil to light in syphilitics.) *Riv. di pat. nerv. e ment.*, 1930, 35, 88.—G. C. Ferrari (Bologna).

1400. McSwiney, B. A., & Robson, J. M. The response of smooth muscle to stimulation of the vagus. *J. Physiol.*, 1929, 68, 124-131.—The latent period of gastric smooth muscle to electrical stimulation of the vagus is about 0.8 sec., contraction 2 sec., and relaxation 6 sec. Tetanus and peripheral summation have been demonstrated, summation being attributed to the cells of Auerbach's plexus.—G. C. Grindley (Cambridge, England).

1401. Miller, F. R., & Laughton, N. B. Myograms yielded by faradic stimulation of the cerebellar nuclei. *Proc. Roy. Soc. Lond. (B)*, 1928, 103, 575-599.—Myograms of the action of muscular antagonists in the fore and hind limb of the decerebrate cat were secured on subjecting the ipsilateral cerebellar nuclei to unipolar faradization. The activity of the flexor muscles was increased and that of the anti-gravity muscles decreased by cerebellar stimulation; while the contrary effects occurred during the subsequent "rebound." This dual cerebellar control is observed in walking, and its disorganization leads to ataxia.—M. D. Vernon (Cambridge, England).

1402. Ojemann, R. H. Studies in handedness: I. A technique for testing unimanual handedness. *J. Educ. Psychol.*, 1930, 21, 597-611.—Five tests of handedness are used and are correlated with a criterion of known handedness constructed from the judgments of parents. The tests are: ball-throwing, needle threading, tapping, paper-cutting, and block-packing. The subjects are 518 pupils in Grades III to VIII. No single test accurately differentiates the various unimanual handedness groups. As more tests are combined, overlapping decreases until, with all five tests combined, the overlapping of the scores made by the left-handed, ambidextrous, and right-handed individuals is relatively small. The combined scores on the five tests are bimodally distributed.—J. A. McGeech (Missouri).

1403. Pavlov, I. P. Certain problems in the physiology of the cerebral hemispheres. Croonian Lecture. *Proc. Roy. Soc. Lond. (B)*, 1928, 103, 97-110.—Gives a brief general survey of the more recent researches of Pavlov and his co-workers upon the conditioned reflex. It has been found that the introduction of a neutral stimulus during the unconditioned reflex activity, e.g., feeding, has a strongly inhibitory effect on the preceding conditioned reflex, and ultimately on the unconditioned reflex. Thus stimulation of the cortex at one point leads to in-

hibition of the rest of the cortex. If, however, the neutral stimulus precedes the unconditioned reflex, the conditioned reflex is reinforced; there is a confluent irradiation of excitation between the two points of cortical stimulation. Extreme fragmentation of cortical function is shown by the fact that it is possible to produce functional derangement at a specific cortical point pertaining to a separate conditioned stimulus, such as a single musical tone, leaving points corresponding to other auditory stimuli unaffected. But vicariation of function also occurs; when an area of the cortex is extirpated so that a generalized cutaneous conditioned reflex is impaired, there is a general irradiation of inhibition to all other conditioned reflexes evoked simultaneously or after a short interval.—M. D. Vernon (Cambridge, England).

1404. Pritchard, E. A. B. A method of recording reflex muscular contractions in man. *J. Physiol.*, 1929, 68, 132-138.—Describes a method of measuring the contraction of one muscle only, the quadriceps femoris, in the knee jerk in man by recording the movement of the patella with the leg fixed; the resulting record is uninfluenced by simultaneous contractions of other muscles, and, it is claimed, follows the contraction of the quadriceps femoris with great fidelity. Examples of records are shown.—G. C. Grindley (Cambridge, England).

1405. Quensel, F. *Ueber Bedeutung und relative Stellung einiger Reflexphänomene.* (The meaning and relative importance of various reflexes.) *J. f. Psychol. u. Neur.*, 1930, 40, 205-213.—H. Marshall (Stanford).

1406. Rizzatti, E. *Reazione pupillare alla luce e sintomi di Argyll-Robertson.* (Pupillary reaction to light and the Argyll-Robertson symptom.) *Note e riv. di psichiat.*, 1930, 55, 233-260.—Upon the basis of 300 careful observations the author concludes that reflex rigidity depends in large part upon age. It is very rare even in persons with metaluetic psychoses, a fact which the author explains by a pathogenic hypothesis. The rigidity of the pupil is frequently associated with other dysfunctions of the iris.—G. C. Ferrari (Bologna).

1407. Rudy, H. *Wesen und Funktion der Mutterschaft.* (The essence and function of maternity.) *Scientia*, 1930, 48, 237-246.—The animal researches of Carlo Ceni show that various kinds of cortical lesions have various effects upon the maternal instinct, the most disturbing of which are frontal lesions. In humans, the physical, psychic and social milieu influence the expression of the maternal instinct. However, the maternal instinct is not, as has been maintained, a special case of the sexual instinct; the two functions are in fact to be contrasted. The business of maternity, besides physical care, is to transmit traditions to the child. Maternity is a function of the normal woman, but she can make of it what she will.—R. G. Sherwood (Redmond, Wash.).

1408. Sherrington, C. S. Notes on the knee-extensor and the mirror myograph. *J. Physiol.*, 1930, 70, 101-107.—Stretch reflexes were recorded for knee and ankle extensors in the decerebrate frog. A

myograph suitable for mammalian observations is described.—G. C. Grindley (Cambridge, England).

1409. Torp, H. *Striære armreflekser, fremkalt ved bimannal faradisk irritasjon (Wernöe), undersøkt ved psykoser.* (Striatic arm reflexes by bimannal faradic stimulation (Wernöe) in psychoses.) *Tidsskr. f. d. norske lægeforening*, 1930, 50, 1259-1263.—Referring to the results of Wernöe (see *Ugeskrift for Læger* No. 31, 1930) pointing to the possibility of the corpus striatum being a center for both blocking and initiation of movements, the writer describes repeated experiments on 79 mental patients, 45 men and 34 women. The patient holds a big electrode in each hand with both arms stretched out in front and slightly bent elbows. Of all cases of schizophrenia, 50% reacted with entirely reversed reflex, 17% with reflexes of blocking or dorsal flexion on one side only—altogether 67% atypical reactions. The manic-depressive cases gave 13% atypical reactions. If Wernöe is right in his contention that this arm reflex is a striatic one, then certain changes in the corpus striatum (whether of organic or functional nature) may play a rôle in schizophrenia.—M. L. Reymert (Mooseheart Laboratory for Child Research).

1410. Vernon, M. D. VIII. The movements of the eye in reading. *Med. Res. Council, Committee Physiol. of Vision*, 1930, Spec. Rep. Ser. No. 148. Pp. 45.—By means of a modified Dodge apparatus, a beam of light reflected from the cornea of the eye was photographed during specified eye movements and during the reading of various types of material. Only horizontal eye movements could be studied by this method. It was found that the eye did not remain steady during voluntary fixation. In only 20% of the cases were voluntary movements performed accurately. Return movements in reading from the end of one line to the beginning of the next were frequently either too short or too long. Kinesthetic sensations from the eye muscles did not give an accurate impression of the extent of the voluntary eye movements. Different subjects varied greatly as to the average duration and frequency of the fixation pauses during reading, but individuals did not vary much with themselves. The rate of reading connected material varied with the attitude of the subject to the material, as follows: Reading was rapid when the subject was completely uninterested and when he was moderately interested and had no difficulty in understanding the meaning. It was slower when the subject was interested and had difficulty in comprehending the meaning, and when the material aroused a train of thought pertaining to some personal interest.—P. H. Ewert (Vermont).

[See also abstracts 1335, 1342, 1343, 1362, 1366, 1482, 1492, 1572, 1587, 1673, 1736.]

PLANT AND ANIMAL BEHAVIOR

1411. André, H., Buytendijk, F. S. S., Dwelshauvers, G., & Manquat, M. *Vues sur la psychologie animale.* (Views on animal psychology.) Paris: Vrin, 1930. Pp. 173. 20 fr.—This book is a collection of seven different articles. I. The difference in nature between plants and animals (20

pages), by Hans André. He thinks that all life possesses a certain autonomy in its activity: it draws this activity from itself and uses it for its own purposes. However, while the animal is autonomous in its actions, the plant is autonomous only in the accomplishment of an act. The plant is pre-eminently a static being, while the animal is a being of action. II. The essential differences in psychological functions between man and animals, by F. J. J. Buytendijk. Animals observe relations and remember them, but have only very vague representations. Representation, ideas, and notions are the indications of the mind's fundamental function. A conscious separation of the subject and the object is the point of departure of all mental functions peculiar to man. III. A discussion of the Buytendijk paper, by R. Dalbiez. IV. A description of the organism, by F. J. J. Buytendijk. V. The biological value of the poetic art of Claudel, by F. J. J. Buytendijk and H. André. VI. Psychological observations on a black Angora cat, by G. Dwelshauvers. VII. Tropisms in animal behavior, by M. Manquat. Tropisms, i.e., imperative attractions and repulsions, do not exist, but animals are influenced to act according to these repulsions and attractions. There are determining stimuli when there is an interest in the determination, but there are no imperative stimuli. No bibliography.—Math. H. Piéron (Sorbonne).

1412. Bourguignon, G. *L'accommodation et la réfraction chez les poissons osseux (Téléostéens).* (Accommodation and refraction in the bony fishes (teleosts).) *Méd.*, 1930, 2, 686-701.—Accommodation of the optic apparatus is found throughout almost the whole of the animal series. The teleosts present a type of accommodation by the displacement of the retina, while in the human eye and in that of the superior vertebrates the retina and the dioptric system have a fixed position, and the crystalline lens undergoes deformation through the action of the ciliary muscle. It is also this muscle which, in the bony fishes, deforms the eye-ball in such a manner that the anterior-posterior diameter of the eye is increased.—Math. H. Piéron (Sorbonne).

1413. Bretegnier, L. *L'activité psychique chez les animaux. Instinct et intelligence.* (The psychic activities of animals. Instinct and intelligence.) Paris: Vigot, 1930. Pp. 386. 50 frs.—This work contains 9 chapters. The first concerns the history of the question and presents, with numerous references, the tendencies and opinions of all ancient and modern authors, including literary men who have attempted to solve the mystery of the animal soul. The second chapter deals with the methods of investigation employed in animal psychology and constitutes a veritable compendium of the experimental conditions actually used to reveal those factors which would remain concealed if the animals were behaving under normal conditions. The third, fourth, and fifth chapters treat tropisms, reflexes and their associations, and instinct (criteria, imperfections and errors, variations, nature and origin, the instinct of orientation in vertebrates and invertebrates). The sixth chapter completes the fifth by presenting the psychic characteristics of the social instincts (bees and ants)

where the very curious and complex instincts described are not the sole determinants of behavior. There is here added a certain intelligent plasticity, illustrated in the discussion, which permits the adaptation of the insect to the diverse conditions of the environment, the faculty called by J. H. Fabre discernment, the first light of intelligence. The seventh chapter describes the feelings and passions (affective states) which are peculiar to man and animals. The eighth chapter is the principal and most important part of the work: animal intelligence. Evidence of this intelligence is presented in describing phases of the struggle for existence of wild animals and in describing the precautions, the ruses, and the initiatives learned and revealed at certain ages of these animals. The ninth chapter is devoted to language in animals, the language of sounds and cries and of gestures. A bibliography.—*Math. H. Piéron* (Sorbonne).

1414. Cressman, A. W., & Dumestre, J. O. The feeding rate of the Australian lady beetle, *Rodolia cardinalis*. *J. Agric. Res.*, 1930, 41, 197-203.—The feeding rate of this beetle, which eats only one species of scale insect, was found to be a function of temperature, age, season of the year, and sex. Curves showing these relations are given.—*C. M. Louttit* (Ohio).

1415. Freeman, G. L., & Papez, J. W. The effect of sub-cortical lesions on the visual discrimination of rats. *J. Comp. Psychol.*, 1930, 11, 185-191.—Animals with lesions of the superior colliculi and sensory thalamus were trained in a Yerkes discrimination box. The lesions were produced by dental probes inserted through a hole in the brain case. The results showed an apparent positive correlation between the amount of sub-cortical injury and retardation in the learning of the visual habit. The authors compare these results with those obtained by Lashley for cortical lesion, but state that only tentative conclusions may be drawn because of the small number of cases included in their study.—*G. L. Freeman* (Yale).

1416. Fritz, M. F. Long time training of white rats on antagonistic visual habits. *J. Comp. Psychol.*, 1930, 11, 171-184.—One rat was given 8000 trials (50 per day) and three others 2000 trials each on a problem involving two mutually exclusive visual habits. The problem consisted of learning to choose one of two cues, a lighted or an unlighted window, leading to food. The rats were alternated from one habit to the other as rapidly as each was learned. The learning curves show only mild negative acceleration and in some cases practically none at all. There is marked evidence of negative transfer. Each reversal seems to be more or less of an independent learning period and the time of reversals remains relatively constant. There is a decided tendency toward uniform improvement during each daily training period. An appreciable daily loss occurs during the time the problem is not worked upon. The results seem to indicate that the rat does not employ symbolic processes. Marked individual differences are found. Bibliography of ten titles.—*M. F. Fritz* (Iowa State).

1417. Gengerelli, J. A. The principle of maxima and minima in animal learning. *J. Comp. Psychol.*, 1930, 11, 193-236.—A series of experiments were performed with blinded and normal white rats to determine the nature of the path which the animals would eventually select from an indefinite number of possible paths leading to food. The animals entered by one corner of the platform 6 ft. by 6 ft. which was enclosed on all sides by a 5 in. wall and covered with wire mesh. Food was placed at the diagonally opposite corner to the entrance corner, in a small food box which was outside of the platform and which the animal entered by means of a short alley leading to it. Both food and observer were invisible to the animal. It was found in practically all cases that the path finally chosen by the animals (both normal and blinded), when all possibility of olfactory orientation was eliminated, was the path of "least effort," namely, the path whose distance was a minimum. In the experiments where there were no obstructions on the platform, the actual path finally chosen was the diagonal from the entrance corner to the food corner. The behavior of the rats can be most accurately described by stating that the path which the animals finally chose served as a limit to which they approximated more and more closely with each successive trail.—*J. A. Gengerelli* (California).

1418. Guillaume, P. Les niveaux d'intelligence de l'animal à l'enfant. (The levels of intelligence of animals in relation to children.) *Bull. Soc. Binet*, 1930, 30, 91-108.—The author describes several easy experiments capable of being done by both animals and children. He shows that both can solve the task, but in such a fashion as to denote different intelligence levels. The animal and the young child succeed through the method of trial and error, the solutions having a fumbling character. The older children and adults reason and comprehend the problem, their reactions being intellectual. However, just as blind fumbling is not the only process known to the animal, so we find that it is not accurate to say that man has completely renounced this process. The latter uses this procedure each time that an imposed problem is too difficult, exceeding his ability.—*Math. H. Piéron* (Sorbonne).

1419. Morgan, C. L. The animal mind. New York: Longmans, 1930. Pp. xii + 275. \$4.25.—A discussion of some of the problems of the animal mind is presented for the consideration of the "Gentle Reader." Three levels of mentality are distinguished: the percipient, the perceptive, and the reflective. To the extent that fore-planning enters into behavior, the percipient stage is passed. Some reference to self enters into reflective mentality.—*W. S. Hunter* (Clark).

1420. Portier, P. Localisation des phénomènes de sensibilité chez les insectes. (The localization of the phenomena of sensibility in insects.) *C. r. Soc. biol.*, 1930, 105, 441-444.—In the lower vertebrates the phenomena of conscious sensibility are located in the brain, and the animal with its spinal cord sectioned below the medulla does not make spontaneous movements but only reflexes more or less adaptive.

Experiments have been made on decapitated insects to see the effect on behavior of regularly increasing temperatures and of nicotine. Decapitated insects behave entirely differently from decapitated lower vertebrates. The author concludes that in insects the phenomena of conscious sensibility are not localized in the cerebral ganglia and that the ventral nerve chain is the seat both of reflex phenomena and of the phenomena of sensibility.—*Math. H. Piéron* (Sorbonne).

1421. Rose, M. *Les idées actuelles sur les tropismes animaux et végétaux*. (Current conceptions of plant and animal tropisms.) *Ann. de physiol. et de physico-chimie biol.*, 1930, 6, 413-416.—Loeb held to the identity of tropic phenomena in plants and animals because sessile animals curved like plants, because the Roscoe-Bunsen law applied to both, and because the same wave lengths produce the movements. Current researches show that the curvature of sessile animals is a plastic tonus (Hunter), a myostatic reflex (Sherrington). It is a reflex. In plants the curvature is due to the variations of growth determined by the meristems. The two curvatures are therefore different. Embryos react well, as do plants, but in the course of development the nervous system appears and its reactions supplement the purely humoral reactions. It is the nervous system which separates plants and animals.—*Math. H. Piéron* (Sorbonne).

1422. Schroeder, W. C. *Migrations and other phases in the life history of the cod off southern New England*. *Bull. Bur. Fish.*, 1930, 46, 1-136.—Tagging experiments with cod indicate that many of these fish migrate to the west and south of southern New England beginning in October and that they return to the grounds in the spring, usually March and April. The only environmental condition that appears to be correlated with this migration is the temperature. However, this apparently acts only to start the migration, inasmuch as it is not affected by further temperature changes.—*C. M. Louttit* (Ohio).

1423. Tanner, W. L. *Plant lice pumping in unison*. *Science*, 1930, 72, 560.—Aphids in feeding lift their bodies simultaneously; an individual surrounded by a cardboard screen continues in step and pauses when the others pause. Colonies somewhat separated have independent rhythms.—*R. R. Willoughby* (Clark).

1424. Thompson, S. H. *Salmon-tagging experiments in Alaska, 1929*. *Bull. Bur. Fish.*, 1930, 46, 177-195.—An extension of previous reports on salmon migration (see IV: 1041).—*C. M. Louttit* (Ohio).

1425. Tryon, R. C. *Studies in individual differences in maze ability. I. The measurement of the reliability of individual differences*. *J. Comp. Psychol.*, 1930, 11, 145-170.—As part of the major problem of studying the hereditary causation of individual differences among rats in maze ability, this paper describes both the principles used in constructing the mazes and the results which bear on the matter of reliable differentiation between animals in this ability. Derived mainly from the theory of human men-

tal measurement, eight cardinal principles which may be utilized in the construction of reliable scales of maze ability in rats are formulated. Two T-mazes, X (17 blind alleys) and Y (20 blind alleys) were constructed, 141 animals selected, procedure planned, and results analyzed on the basis of these principles. The reliability coefficients of the maze scores (total errors made on 18 trials on each maze) were as follows: $r_x = .9876 \pm .0014$, and $r_y = .9682 \pm .0018$. The error of an individual rat's score due to unsystematic factors (errors of measurement) was calculated, and its practical experimental application shown. These results are compared with the reliability data on the best human mental measuring devices and the conclusion drawn that the maze for rats may be constructed to be equally as reliable as the human measuring sticks, and perhaps more reliable.—*R. C. Tryon* (California).

1426. Verrier, M. L. *Contribution à l'étude de la vision chez les Sélaciens*. (Contribution to the study of vision in selacians.) *Ann. des sci. nat.*, 1930, 13, 53-63.—After presenting a historical review of the work on the non-bony fisher, the author relates his own work to the morphological study of the retina, of the suspensory apparatus of the lens, and of the optic nerves and the chiasma. He then presents the following physiological studies: determination of the extent of the binocular and monocular fields of vision, a study of refraction and of the sensibility of the retina to light. In the biological study he examines the habitat and ecology of the animals, the morphological character of the visual cells, and the form of the pupil. The eyes of selacians are primitive organs and they are adapted to the habitat and behavior of the individual less than is the case with other vertebrates. A bibliography of 40 titles.—*Math. H. Piéron* (Sorbonne).

EVOLUTION AND HEREDITY

1427. Blakeslee, A. F. *Heredity and environment*. *Scient. Mo.*, 1930, 31, 556-559.—The two are interacting sets of forces.—*J. F. Dashiell* (North Carolina).

1428. Frischeisen-Köhler, I. *Untersuchungen an Schulseugnisse von Zwillingen*. (Scholastic achievement of twins.) *Zsch. f. angew. Psychol.*, 1930, 37, 385-416.—This study is an attempt to measure the relative contribution of hereditary and "peristatic" influences to school marks. Subjects were 120 monozygotic twins (64 boys, 56 girls) and 82 dizygotic twins (40 boys, 42 girls); all pairs were of like sex. Comparisons were made in terms of the means of the deviations between one twin's marks in 19 different studies and his partner's. The intra-twin deviation was always greater with fraternal than with identical twins, with more than half of the studies revealing statistically reliable differences. The average deviation of the identical twins divided by the AD of the fraternal twins gave a percentage value which was used as a measure of the environmental determinants; for the total group this value was 54.4, and ran somewhat higher for boys than for girls. The changing size of this coefficient with years showed that external influences were maximal in early pu-

berty. Analysis of the different school branches indicated language and history achievement as most modifiable by the milieu.—*G. W. Hartmann* (Berlin).

1429. Gun, W. T. J. Heredity of the Stewarts. *Eug. Rev.*, 1930, 22, 195-201.—The mental and character traits of James I, Charles I, Charles II, James II, William III, Mary II, and her sister Anne are compared with those of their ascendants in an attempt to establish segregated inheritance.—*B. S. Burks* (Stanford).

1430. Holub, A. Kriminelle Anlagen und Erblichkeit? (Criminal aptitudes and heredity?) *Neue Generation*, 1930, 26, 22-24.—(*Soc. Sci. Abst. II*: 16911).

1431. Perkins, H. F. Hereditary factors in rural communities. *Eugenics*, 1930, 3, 287-292.—(*Soc. Sci. Abst. II*: 16813).

1432. Popenoe, P. Eugenic sterilization in California. 19. A statistical study of the patients of a psychiatrist in private practice. *Amer. J. Psychiat.*, 1930, 10, 117-133.—(*Soc. Sci. Abst. II*: 16814).

1433. Roberts, J. A. F. Eugenics without Mendelism. *Eug. Rev.*, 1930, 22, 187-193.—"Most of the differences that distinguish normal from defective and desirable from less desirable defy Mendelian analysis. . . . Popular eugenic argument derives its force from such cases as those of the well-known defective or highly excellent families, and these are the cases in which it can be felt that action is possible, that it is not unfair, and that it would be useful."—*B. S. Burks* (Stanford).

1434. Simester, E. Four generations of the d'Isgenic family. *Eugenics*, 1930, 3, 265-271.—(*Soc. Sci. Abst. II*: 16921).

1435. Skiff, T. Fecundity of mothers in dependent families in relation to their ages and birthplaces. *Eugenics*, 1930, 3, 305-310.—(*Soc. Sci. Abst. II*: 16802).

1436. Sydenstricker, E. Differential fertility according to economic status. *U. S. Pub. Health Rep.*, 1929, 44, 2101-2107.—(*Soc. Sci. Abst. II*: 16803).

1437. Wingfield, A. H. The intelligence of twins. *Eug. Rev.*, 1930, 22, 183-186.—Summary of data previously reported.—*B. S. Burks* (Stanford).

[See also abstracts 1494, 1512, 1527, 1582, 1741.]

SPECIAL MENTAL CONDITIONS

1438. Bose, G. Dreams. *Indian J. Psychol.*, 1930, 5, 38-86.—A discussion of dream symbolism and the mechanism of dreams after the Freudian conception. Elucidates dream wish, the censor, sexual material in dreams, types of dreams, the supernatural in dreams, and dreams in the lower animals.—*L. A. Averill* (Worcester State Normal School).

1439. Brown, F. W. Life's higher values. *Ment. Hygiene Bull.*, 1930, 3, 1, 4.—A new conception of life's higher values is being developed as the outcome of the effort of mental hygiene to discover the factors which produce mental conflict and prevent the proper integration of the personality. One may find his highest satisfaction in life upon the infantile level

of physical desire, the consciously selfish level of irresponsible childhood, or the level which brings the recognition of his obligations to society as well as himself. This last level is essential to mental health and to the integration of the personality, which is life's highest value.—*E. M. Ligon* (Union).

1440. De Sanctis, S. La psicologia differenziale e la costruzione dei tipi di gruppo. (Differential psychology and the construction of group types.) *Rinascenza med.*, 1929, 6, 1-9.—The origin and development of differential psychology has resulted in a convergence of its studies into the current movement of bio-psycho-typology. It is necessary to abandon simple impressionism and descriptivism for better founded techniques. In order to establish group types the school of De Sanctis has employed for 30 years the method of biographical cards and for 15 years the method of individual evaluation cards (psycho-biograms). In these last one notes the more evident traits in terms of variations from the means. Where it is possible to have quantitative values, it is necessary to employ mental tests. In the completed examination the uniformity of the schema is fundamental, as are also the descriptive and experimental methods and the uniformity of notation. Differential psychology has practical ends. In order to attain these it is sufficient to bring out the psychic characteristics, which in practice are motor phenomena, reactions and expressions. The deeper level of human personality is not touched by the researches of this field. Nevertheless this limitation in the application of the method has the advantage of decreasing the often imputed error of over-generalization.—*M. Ponzo* (Turin).

1441. Desoille, H. Croyances et états mentaux des occultistes actuels. (Beliefs and mental states of living occultists.) *Hygiène ment.*, 1930, 25, 121-145.—In the first part the author presents some beliefs and modern practices (occultism in general, spiritualism, theosophy, magic). In the second part he discusses the abnormal mental states which appear only during seances and those which appear in daily life. In the third part he presents the mental troubles of the occultists (pithiatism, hallucinations, etc.)—*Math. H. Piéron* (Sorbonne).

1442. Endres, F. C. Das magische Weltbild und ihre Elemente. (The magic world-picture and its elements.) *Psychol. Rundschau*, 1930, 2, 228-233.—The author attacks the problem of the occult and its relationship to the belief in magic of an earlier day. Always there will be those things which are beyond human comprehension; the unknown is the occult. There are those who believe that all possible knowledge will come under man's intelligent grasp in time, and those who believe that wisdom is elusive and the occult will always exist. Our present-day explanation is a rationalistic one, taking for granted that there is no supernatural, merely that it has not come under sufficient investigation. The author argues that the occultist views the world from a different standpoint and may be quite as near right as the analyst. He reasons from life experiences, from feeling, and from intuition, which is a type of insight. In rationalism we have the structure of

causality, in intuition the experience of finality. The former deals with life arising automatically; to the latter the world and life are one with himself.—*A. B. Herrig* (Michigan Central State Teachers College).

1443. Federn, —, Meng, —, & Bratt, L. *Psykoanalysen i populär framställning*. (Psychoanalysis in popular exposition.) Stockholm: Bonniers, 1929.—This Swedish book contains several articles by various writers taken from *Das psychoanalytische Volksbuch* edited by Federn and Meng, and published by Hippokrat Verlag, with the addition of four new articles by Iwan Bratt: *The Basis of Libido Development*, *Psychoanalytical Treatment*, *Adjustment to Reality*, and *Unsuccessful Adjustment*. Bratt's articles are based on previous radio lectures in Sweden.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1444. Gemelli, A. *Sulla natura e sulla genesi del carattere*. (The nature and genesis of character.) *Quad. di psichiat.*, 1930, 17, 41-61.—So far characterology has merely marked time because in the study of normal individuals it has not followed the ideas and practice which psychoanalysis and individual psychology have shown so fruitful for the study of abnormal individuals. Typology also has perverted characterological research, while psychiatry has shown a more fruitful approach. It has delivered us from the conceptions of biological determinism and has shown us that liberty is the functional law of the mind.—*G. C. Ferrari* (Bologna).

1445. Hitschmann, E. *Phimose und Neurose*. (Phimosis and neurosis.) *Zentbl. f. Psychotherap.*, 1930, 10, 582-586.—This publication was prompted by Hadenfeld's article on the correction of infantile phimosis by stretching of the prepuce (*Munch. med. Woch.*, April, 1930). According to Hitschmann any operation involving the genitals always has an effect on the nervous and psychic life of the patient and may become the foundation of a serious hysteria or neurosis. Any such operation should be performed with great caution, particularly as regards the fear of castration (*Kastrationsangst*). If there are no technical difficulties, the first week after birth would be the most desirable time. The years that predispose for the fear of castration (3-8) should be avoided. If the physician considers only the anatomical aspect of such an operation his success may be entirely illusory, for he has failed to improve or has even intensified the psychic situation.—*C. W. Brown* (California).

1446. Hoffman, H. *Charakter und Umwelt*. (Character and environment.) *Dtsch. med. Woch.*, 1929, 55, 383-386.—(*Soc. Sci. Abst.* II: 16750).

1447. Irving, W. S. *Thoughts on Mr. Saltmarsh's report on a series of sittings*. *Proc. Soc. Psych. Res.*, 1930, 39, 333-342.—Some reports of sittings are included.—*W. S. Taylor* (Smith).

1448. Janet, P. *L'évolution psychologique de la personnalité*. (The psychological evolution of personality.) Paris: Chahine, 1930. Pp. 581. 60 fr.—The first part of the work studies the bodily personality which man has in common with other living

beings but which distinguishes them from non-living objects. There are 8 chapters in this part: the problem of personality, synesthesia, the sense of attitude and equilibrium, the body, depersonalization, the fundamental feelings, the problem of consciousness, the conflict of consciousness. The second part, which includes 12 chapters, treats of social personality: the social feelings of love, feelings of hate, egoism and personal interest, individualization, possessions, abilities and the hierarchy, character, social valuation, the delusions of valuation, the feelings of enterprise, the ego and the spirit, and the illusions of autism. The third part, which is the complement of the lectures of the preceding year, contains 5 chapters and treats of temporal personality and its organization in time. The chapter titles are as follows: somnambulism, double personality, biography of the individual, individuality, and the future of personality. No bibliography.—*Math. H. Piéron* (Sorbonne).

1449. Jung, C. G. *Psychologische Typen*. (Psychological types.) (5th ed.) Zurich: Rascher, 1930. Pp. 724. M. 16.00.—*W. S. Hunter* (Clark).

1450. Kenworthy, M. E. *Social maladjustments (emotional) in the intellectually normal*. *Ment. Hygiene*, 1930, 14, 837-852.—The focus of this paper is the study of those individuals with an IQ between 90 and 110. The roots of emotional difficulties are found in early childhood. The first two years are of vital importance. The child who establishes a normal nursing rhythm easily gains a satisfaction. This is the most important facet of the child's experience at this age. Dissatisfaction leads to thumb sucking. Punishment does not remove the cause but intensifies the conflict. Other experiences of early life discussed are: sphincter control, sleeping habits, habits of cleanliness, emotional maladjustment in the parents, and the arrival of a new baby in the family. Satisfaction is constructive if they help in the emotional development of the child; they are destructive if they produce fixations at infantile levels. The child is safe who is made constructively secure for his first eight years.—*E. M. Ligon* (Union).

1451. Kirkpatrick, C. *Statistical method in relation to personality and personality maladjustment*. *Amer. Sociol. Soc. Papers*, 1930, 24, 241-242.—(*Soc. Sci. Abst.* II: 15646).

1452. Kohn, S. C. *We've gone psychiatric*. *Survey*, 1930, 64, 188-190.—Although psychology and psychiatry have much to contribute toward human happiness, they will be seriously handicapped unless there is developed a greater understanding and tolerance of deviation, less blind faith in tests, and a belief in the significance of moral values.—*D. Grauer* (Chicago).

1453. Kretschmer, E. *La structure du corps et le caractère. Recherches sur le problème de la constitution et la science des tempéraments*. (The structure of the body and character. Researches on the problem of the constitution and the science of temperaments.) (Trans. by Jankelévitch.) Paris: Payot, 1930. Pp. 252. 40 fr.—Going further with the celebrated studies of Kraepelin on the form of the human body in relation to diseases and psycho-

logical alterations, Kretschmer enlarges the field of his clinical researches and the barriers between disease and health progressively disappear. The morbid circular type is imperceptibly and by degrees blended with the normal cyclothymic personality, and the schizophrenic patient becomes an abortive schizoid of whom the rudiments of character, or rather the biological substratum, must be looked for in the normal schizothymic person. These two main varieties of human personality and of morbid forms present a manner of corporeal existence which is impressive because of the constance of its typical peculiarities, is accessible to measurements, and is of primordial importance for the purpose of comprehending the main biological processes. The study is divided into two parts: a discussion of the structure of the body and a discussion of temperaments. There is no bibliography.—*Math. H. Piéron* (Sorbonne).

1454. Kronfeld, A. *Charakterausdruck und Ausdrucks-kunde*. (The expression of personality and the science of expression.) *Dtsch. med. Woch.*, 1929, 55, 471-474.—(*Soc. Sci. Abst.* II: 16751).

1455. Lutz, —. *Klinische Untersuchungs- und Beobachtungsmethoden*. (Methods of clinical investigation and observation.) *Psychol. Rundschau*, 1930, 2, 215-216.—Psychiatric clinical study has in mind diagnosis, prognosis, and therapy, and these aims determine the methods to be used. For the purpose the observer must be well trained in the observation of essentials, in order to avoid giving value to useless details. Jasper says he must be rich in viewpoints. A good physical examination must precede. The psychic examination concerns itself not only with functions and capacities, but with the whole development of life. Case histories are essential, as well as psychological testing. The tester must always be able to enter into the life of the person tested, and get his rich observations through this feeling of empathy.—*A. B. Herrig* (Michigan Central State Teachers College).

1456. Lutz, J. *Psychiatrisch-klinische Untersuchungs- und Beobachtungsmethoden*. (Psychiatric-clinical methods in testing and observation.) *Psychol. Rundschau*, 1930, 2, 244-255.—This is a full report of Lutz's paper presented at the Psychotechnical Conference at Magglingen. He emphasizes the need of building up in one's mind a complete picture of the personality of the person examined, which cannot be done without understanding the difference between testing and observing. The former is more non-personal, the latter gets at the personality. The former is a technic, the latter an art. Both are essential for a diagnosis upon which a prognosis and a therapy can be based. A single diagnosis is only a cross-section of a person at the moment, and fails to recognize him as an ever-changing, dynamic self. The author discusses the value of formal questionnaires for diagnosis and does not consider that they render the final word. Emphasis is placed on a knowledge of the heredity and environmental influences, in order to sense the whole constellation of life. Every remark of the patient is significant. Lutz makes application of his thesis to all intelli-

gence testing, up to the present time wholly inadequate because lacking personality analysis. The complexity of intelligence is not realized by testers. Most difficult of all is a study of the affective life. Although Lutz speaks from the standpoint of psychiatry, he emphasizes the need for all students of personality of gaining this viewpoint, and claims that mere testing is a long way from the art of observation.—*A. B. Herrig* (Michigan Central State Teachers College).

1457. Nathan, M. *Troubles juvéniles de l'affectivité et du caractère*. (Juvenile disorders of affectivity and character.) Paris: Flammarion, 1930. Pp. 250. 12 fra.—There are three principal parts: (1) disorders of affectivity and character in the organic psychoses (epidemic encephalitis, epilepsy, juvenile general paralysis, dementia praecox, catatonias); (2) disorders of affectivity and character in the non-organic psychoses (introversions, dilettantism, mythomania); and (3) total character (non-paranoiac jealousies, spirit of contradiction, mental anorexia, lunacy and cyclothymia, ennui, inhibitions, repressions, perversions). No bibliography.—*Math. H. Piéron* (Sorbonne).

1458. Newcomb, T. M. Does extroversion-introversion offer a clue for the prognosis and treatment of problem boys? *Ment. Hygiene*, 1930, 14, 919-925.—The writer proposed to observe and record, by two methods, behavior indicative of extroversion-introversion. The first method was an objective one, based on observing actual responses to typical situations. No consistency was found among the subjects, boys, in making extroverted or introverted responses. The second method was a rating scale. This gave much higher correlations. The more objective method seemed more reliable, and the rating-scale results were attributed to halo effects. The writer then concludes that if type distinctions do exist, they are not measurable by methods such as the ones used in this study, and are therefore of questionable value for therapeutic purposes.—*E. M. Ligon* (Union).

1459. Nohl, H. *Die Widersprüche im Charakter und ihre pädagogische Bedeutung*. (Contradictions in character and their pedagogical meaning.) *Erziehung*, 1930, 6, 1-13.—*A. Römer* (Leipzig).

1460. Partridge, G. E. Psychopathological study of Jean-Nicolas-Arthur Rimbaud. *Psychoanal. Rev.*, 1930, 17, 401-425.—*D. Shakow* (Worcester State Hospital).

1461. Petri, O. *La personalità di uno spirito*. (The personality of a phantom.) Turin: Bocca, 1929. Pp. xv + 210.—The title and sub-title, subconsciousness and spiritism, indicate that the book is devoted to metaphysics. The author refers to the methods employed, but he particularly emphasizes the communications received when he has been filled with the fluid thought of Nietzsche. In the seances the author's wife serves as the medium. The author believes that he can secure through these trances the intimate self of the subconscious which is manifested under a profound process of auto-suggestive introspection.—*M. Ponzo* (Turin).

1462. Pioli, G. Oliviero Cromwell. Il dittatore e l'uomo. (Oliver Cromwell, dictator and man.) *Bilychnis*, 1930, 19, 333-348.—The author analyzes the different interpretations given to the historic figure of Cromwell. He attempts to reconcile the moral and religious aspects of Cromwell with his political work and to arrive thereby at a psychological and ethical unity.—G. C. Ferrari (Bologna).

1463. Placci, C. Divagazioni psicologiche. (Psychological divagations.) *Nuova antologia*, 1930, 65, 472-476.—Many human manifestations, rejuvenation, diversification, etc., have their causes in the unconscious. Even the conscious forces which we employ to dominate and extinguish this unconscious world permit us when we are particularly wise to borrow anew from this storehouse. According to the author this happens in the fine arts. (Examples are to be found in the most recent innovations of art.) The author also alludes to analogous facts in the domains of philosophy, religion, and politics.—M. Ponzo (Turin).

1464. Prince, W. F. Presidential address. *Proc. Soc. Psych. Res.*, 1930, 39, 273-304.—This address presents "the evolution of a psychical researcher," in which its author has "slowly, very slowly, been forced to accept types of supernormal mental phenomena, to the number, in their external description, of half a dozen"; and argues that "psychical research demands intellectual rectitude . . . and the gradual accumulation of evidence."—W. S. Taylor (Smith).

1465. Reikh, V. Psikhovanie kak estestvenno nauchnaya distsiplina. (Psychoanalysis as a natural science.) *Vestnik kommunisticheskoi akademii*, 1929, 35/36, 345-350.—(*Soc. Sci. Abst.* II: 16969).

1466. Rossi, M. M. Il problema di Don Giovanni. (The problem of Don Juan.) *Riv. psicol.*, 1930, 24, 173-183.—An interpretation of Don Juan as an eternal human psychological type.—T. M. Abel (Sarah Lawrence).

1467. Sadler, W. S. The road to attainment; the elements of pep. (2d ed.) Chicago: Rockwell, 1930. Pp. 142. \$1.25.—R. R. Willoughby (Clark).

1468. Salter, Mrs. W. H. Some incidents occurring at sittings with Mrs. Leonard which may throw light on their *modus operandi*. *Proc. Soc. Psych. Res.*, 1930, 39, 306-332.—W. S. Taylor (Smith).

1469. Schmitz, O. A. H. Glück und Lebenskunst. (Happiness and the art of living.) *Psychol. Rundschau*, 1930, 2, 233-238.—Modern man seeks not happiness, but satisfaction of ambition. He finds happiness only as an accompaniment to other strivings. The author holds that satisfaction of an ambition is never happiness; it may give a temporary thrill, whereas happiness is an enduring state. It is elusive, disappearing if sought as an end, but is an accompaniment of ends sought. Happiness lies in satisfaction of our subconscious urges. Living the consciously good life as an integrated whole brings happiness. The art of living is discussed. Most persons look at life, not into life. Striving for the desired things of life is no evidence of command of the art of living. The wish of all is to be free, to follow

one's own bent, but it is doubtful whether one as a rule knows his innermost wishes, which are too often not realized until it is too late to seek them.—A. B. Herrig (Michigan Central State Teachers College).

1470. Schultz, I. H. Wissenschaftliche Psychotherapie. (Scientific psychotherapy.) *Zentbl. f. Psychotherap.*, 1930, 3, 539-544.—The author classifies neuroses as (1) peculiarly mental, psychopathic, (2) referred to some organ, as heart, stomach, etc., or (3) based upon some non-disabling illness, as diabetes; and he classifies the methods of psychotherapy as (1) rational or waking psychotherapy or mental guidance or psychagogics, which takes a relatively short time, (2) suggestion and hypnosis, with length of treatment depending on the severity and duration of the neurosis, and (3) psychoanalysis, which usually requires an extended period of treatments. He makes a plea for the recognition of various forms of psychotherapy by adequately trained practitioners as a definite department of medicine.—R. G. Sherwood (Redmond, Wash.).

1471. Spadolini, N. Alcune considerazioni sulla fisiologia e fisiopatologia del sonno. (A consideration of the physiology and physiopathology of sleep.) *Note e riv. di psichiat.*, 1930, 55, 283-290.—The author reviews the most recent theories of sleep and concludes that there is no one center for sleep, but many different centers which contribute to the regulation of that phenomenon. Sleep is the result of the equilibrium of the vegetative and psychic life of the organism.—G. C. Ferrari (Bologna).

1472. Stockmayer, W. Figuren des kollektiven Unbewussten. (Figures of the collective unconscious.) *Zentbl. f. Psychotherap.*, 1930, 10, 587-598.—Examples of the "superpersonal" unconscious as differentiated from the personal unconscious (Jung). Visions of a patient as she wrote them down from memory. Many analogies with mythological figures.—C. W. Brown (California).

1473. White, B. C. The relative value of case study and statistics. *Family*, 1930, 10, 259-265.—The case study method involves facts of a non-numerical nature, is particularistic, and may throw light on factors that will be of service to a statistical analysis. The function of statistics is to study the distribution of measurable traits in social groups and to generalize from random samples. The two methods do not conflict but supplement each other.—D. Grauer (Chicago).

1474. Williams, F. E. Toward a science of man. *Survey*, 1930, 64, 123-125.—The inductive method has dominated all fields of modern life except that of human behavior. Students of behavior differ in their theories, but are all agreed on the principle of explaining human conduct by means of observation and experimentation rather than by the deductive methods of law, religion, morals, and ethics. The conflict between the two methods would be less severe if the facts obtained by the methods were synthesized.—D. Grauer (Chicago).

[See also abstracts 1383, 1483, 1533, 1537, 1542, 1547, 1553, 1560, 1566, 1574, 1580, 1581, 1597, 1599, 1609, 1648, 1676, 1735, 1739, 1747.]

NERVOUS AND MENTAL DISORDERS

1475. Allendy, D. Les représentations et l'instinct de la mort. (Ideas and the instinct of death.) *Evolution psychiat.*, 1929, Ser. 2, No. 1, 11-26.—Ideas of death have often an inordinate importance in psychopathology. The author describes a case of anxiety in a marine officer whose anxiety always revolved around this idea.—*Math. H. Piéron* (Sorbonne).

1476. Berry, R. J. A. The physical basis of mind. *Eug. Rev.*, 1930, 22, 171-182.—Feeble-mindedness is interpreted as an arrest of growth rather than as a retarded rate of growth. Two-thirds of all mental defectives tend to be microcephalic. The brains of defectives have "fewer brain cells than in the normal, and even many of these remain and persist in a small, rudimentary condition." The head size of defectives is therefore likely to be below average. Another of their clinical characteristics is defective vitality, often shown by inferior size, lung capacity, and strength of grip. By way of illustration, these criteria are applied to the case of a woman whose mental age is eleven by the Binet test and eight and a half by the Porteus tests.—*B. S. Burks* (Stanford).

1477. Campbell, C. M. The work of the psychopathic hospital. *Ment. Hygiene*, 1930, 14, 883-900.—The author describes the work of the modern psychopathic hospital, especially as exemplified by the Boston Psychopathic Hospital, of which he is the director. The features described are: the patients received, the administrative conditions of admission, the study, diagnosis, treatment, and disposal of patients, and the psychopathic hospital as a center of research and teaching.—*E. M. Ligon* (Union).

1478. Claude, H. Mécanisme des hallucinations. Syndrome d'action extérieure. (The mechanisms of hallucinations. The syndrome of external action.) *Encéph.*, 1930, 25, 345-359.—There are two types of hallucinations: (1) true hallucinations characterized by the invasion of consciousness by elementary and affectively neutral sensations; (2) pseudo-hallucinations, representing, on the contrary, phenomena of belief or of false perception of reality. These latter are distinguished from the first by their affective coloring, which unites them profoundly to the personality of the subject, and by their complex liaison with a complete system of analogous and synonymous representations which constitutes a syndrome of external action.—*Math. H. Piéron* (Sorbonne).

1479. Collier, H. Vocational guidance for the mentally defective. *Tr. School Bull.*, 1930, 27, 30-34.—List of the papers and reports of the National Vocational Guidance Association.—*E. M. Achilles* (Columbia).

1480. Dayton, N. A. The new statistical system of the Massachusetts department of mental diseases. *Amer. J. Psychiat.*, 1930, 9, 779-803.—The new system increases the availability of information on mental diseases, and makes available new information pertaining to resident patients.—*S. J. Beck* (Boston Psychopathic Hospital).

1481. Dayton, N. A. Abnormal labor as an etiological factor in mental deficiency and other associated conditions: analysis of 20,473 cases. *Prod. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 148-202.—This study of retarded school children in Massachusetts attempts to disclose the relationship between difficult birth conditions and mental deficiency. Although difficult birth has definite effects on such factors as first-born child, neurological defects, over-average height, and emotional instability it does not appear to exert this influence any more on those having IQ's below 80 (mentally deficient) than on those of IQ's above 80 (not mentally deficient). School accomplishment, physical defects, weight, clinical diagnostic groups, and social conduct do not show significant relationships to birth injury. The mothers of mentally deficient children have fewer birth difficulties than other groups not mentally deficient or retarded. "If abnormal labor conditions are to be considered as etiologic factors in the production of deviations from normal intelligence, they exert their greatest influence on the low-grade case, the idiot, or on the high-grade case, the dull normal and low-normal cases."—*M. W. Kuenzel* (Vineland Training School).

1482. De Fleury, M. Une observation clinique de réflexe conditionné. (A clinical observation of a conditioned reflex.) *Encéph.*, 1930, 25, 390-391.—The case described is one of sexual perversion which developed suddenly in a 30-year-old man after an emotional seizure caused by the reading of a story by Maupassant.—*Math. H. Piéron* (Sorbonne).

1483. Del Greco, Fr. Nevrosi e carattere. (Neuroses and character.) *Quad. di psychiat.*, 1930, 17, 81-88.—The author considers human personality troubled by neuroses from the etiological standpoint, that is from the point of view of character. He studies the alterations of character produced by the neuroses as related to the psycho-social environment. The importance of these researches for psychotherapy, mental hygiene, and the other psycho-social sciences is indicated.—*G. C. Ferrari* (Bologna).

1484. Devine, H., Glover, E., Gillespie, R. D., Klein, M., & Payne, S. The psychotherapy of the psychoses. *Brit. J. Med. Psychol.*, 1930, 10, 217-252.—Five papers read at a joint meeting of the section of psychiatry of the Royal Society of Medicine and the medical section of the British Psychological Society in March, 1930, with notes on the subsequent discussion. Devine holds that "apart from physical treatment, the main task of the psychiatrist must be to develop what is normal in the psychotic patient, as he is unable to dissipate what is abnormal." Glover emphasizes the importance of child psychopathology, as Klein also does. Gillespie points out that the patient's intelligence is the prime requisite for therapeutic accessibility. He is more optimistic than Devine as to the outcome of treatment. Payne asserts confidence in psychoanalysis.—*E. R. Hildgard* (Yale).

1485. Dide, M. Rééducation psychologique par le travail. (Psychological reeducation by work.) *Archer*, 1930 (July-April).—The author, a hospital physician, presents the results obtained in his prac-

tice. He assumes the principle that insanity, a psychogenetic disorder, may be combated by the re-education of behavior. He has found individuals with extreme disorders who have been able to recover their professional aptitudes and even to perfect them. Others have been able to learn a new vocation.—*Math. H. Piéron* (Sorbonne).

1486. Doll, E. A. Annual report. Part II. Clinical division. *Tr. School Bull.*, 1930, 27, 17-20.—The clinical division of the research department is responsible for mental diagnosis and classification of all newly admitted children, the analytical study of children presenting behavior problems, re-examination of children continuing in residence, and research studies of special types of cases. Besides this work the division is engaged in special studies of groups of children. A summary card file is maintained which presents for the entire population an abstract of the history of each child. The division offers its services to near-by public school systems. Research fellows are trained and the summer school students receive intensive laboratory instruction and practice.—*E. M. Achilles* (Columbia).

1487. Doll, E. A., & Murphy, D. P. A case of microcephaly following embryonic roentgen irradiation. *Amer. J. Psychiat.*, 1930, 9, 871-878.—Evidence is presented concerning a boy who was irradiated in intra-uterine life and was, at the time of the report, classed as a microcephalic mentally deficient child. The authors conclude that, if the evidence presented, together with other evidence, is reliable, then maternal pelvic irradiation during pregnancy is "one preventable cause for mental deficiency and for the microcephalic type in general." Bibliography.—*S. J. Beck* (Boston Psychopathic Hospital).

1488. Ewen, J. H. Perseveration in the insane epileptic. *J. Ment. Sci.*, 1930, 76, 537-540.—This paper describes an attempt to investigate experimentally the motor, sensory, and ideational features of perseveration in insane epileptics. Both normal and epileptic subjects were given the various tests. In all tests the results indicated that perseveration is a feature of the peculiar mental state of insane epileptics between attacks. Five references are cited.—*E. M. Ligon* (Union).

1489. Ferrari, G. C. Psicologia del lavoro: un metodo originale di applicazione delle malate agitate al lavoro metodico, ma attivo. (Psychology of work: an original method for putting agitated patients to methodical and active work.) *Rass. di stud. psychiat.*, 1930, 19, 834-846.—The author has led the agitated patients of his asylum to engage in needle work of a superior order both in difficulty and in the quality of material employed. He has further given the patients almost complete autonomy and a minimum of supervision. The results have been excellent. This is also indicated by the fact that while as a whole one-half of the patients who have been released in the last three years have been returned to the asylum only 7 of the 43 agitated patients who did the above work have been returned. Of these 7, 3 suffered from cyclothymia. The author concludes that a curative value is possessed only by a superior grade of work which enhances the dignity of the pa-

tient. The article includes much psychological analysis.—*G. C. Ferrari* (Bologna).

1490. Friedemann, M. Cleptomania: the analytic and forensic aspects. *Psychoanal. Rev.*, 1930, 17, 452-470.—The article is introduced with a discussion of the general nature of cleptomania, the medical as opposed to the legal view, and a comparison of the cleptomaniac and the habitual thief. This is followed by a case history and an analysis of it. A discussion from the viewpoint of criminal law concludes the article.—*D. Shakow* (Worcester State Hospital).

1491. Gerini, C. Relazione sull' influenza diretta ed ereditaria dell'alcolismo sugli ammalati ricoverati nel reparto di osservazione psichiatrica di Livorno negli anni 1902-1926. (Account of the influence of direct and hereditary alcoholism on recovered patients in a series of psychiatric observations at Livorno from 1902-1926.) *Rass. stud. psychiat.*, 1930, 19, 595-627.—After having examined recent literature on alcoholism, studied from a clinical, anatomical, experimental and social point of view, the author presents data derived from the study of insane patients in the municipality of Livorno, considering them statistically and showing the high percentage given by those whose insanity is due to alcoholism, either personal or hereditary, and from this material concludes that there is necessity for studying new means of social defense.—*V. D'Agostino* (Turin).

1492. Giannelli, V. Contributo allo studio dell' infantilismo. (Contribution to the study of infantilism.) *Rass. stud. psychiat.*, 1930, 19, 791-816.—A brief summary is given of the present state of knowledge of infantilisms and one clinical case of the Lorain type is described. According to the author hypoevolution is a part of the topic. It is due to a lack of functional solidarity of the different glands of internal secretion. In the Lorain type of infantilism one finds pre-pubertal, or better non-pubertal, characteristics.—*G. C. Ferrari* (Bologna).

1493. Greene, E. A. Psychoses and mental deficiencies, comparisons and relationship. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 128-147.—The difference between the functional psychoses and mental deficiency is only one of degree. Etiology is considered more important than symptomatology for purposes of diagnosis or treatment. Studies of the physiology and pathology of early infancy are emphasized by the author as contrasted to the study of psychological findings in later life.—*M. W. Kuensel* (Vineland Training School).

1494. Grimbert, Ch. Les psychopathies ou anomalies mentales et l'eugénisme. (Psychopathies or mental anomalies and eugenics.) *Rev. de phil.*, 1930, 30, 129-141.—*Math. H. Piéron* (Sorbonne).

1495. Hilpert, P. Die Bedeutung des linken Parietallappens für das Sprechen. Ein Beitrag zur Lokalisation der Leitungsaphasie. (The importance of the left parietal lobe in speech. A contribution to localization of aphasia due to disturbance in the conduction paths between the sensory and motor

speech centers.) *J. f. Psychol. u. Neur.*, 1930, 40, 225-255.—*H. Marshall* (Stanford).

1496. *Hinsie, L. E.* The treatment of schizophrenia. Baltimore: Williams & Wilkins, 1930. Pp. xviii + 206. \$3.00.—Within the past several years the psychobiological approach to problems of schizophrenia has been gaining steadily. Each year has brought forth a renewed interest, coupled with fresh psychotherapeutic tendencies. In keeping with the trends of modern medicine, psychiatry has been bending its efforts in the direction of prevention. Of the notable successes that have been achieved in the psychical treatment of the major psychoses, an appreciable advance has been made among early cases of schizophrenia. The author describes what progress has been made and what may be expected in the management of schizophrenic syndromes. In the first chapter the author gives a direct and easy reading account of the importance of emotions and ideas in schizophrenia. The second chapter deals with the diagnosis of incipient schizophrenia; the third chapter describes the type of clinical material that will most likely respond favorably to psychotherapy. There then follows a chapter on the actual management of the patient from the time that the patient first enters the physician's office. Specific instructions are given regarding the attitude that the physician should assume towards the patient (Chapter V) and in the subsequent three chapters the manner of handling the several schizophrenic symptoms is referred to. The technic employed is reinforced by citation of clinical material. In a later chapter treatment of the more advanced stages is considered. With special reference to the latter the influence of psychiatric social work and of occupational therapy is given consideration. The book has largely to do with the management of the more genuine psychical symptomatology; nevertheless, there are suggestions as to the possible modes of therapy of physical complaints in schizophrenia. The final chapter comprises a survey of the literature on the treatment of schizophrenia.—*L. E. Hinsie*.

1497. *Holtzmann, F.* Die Forderungen der psychischen Hygiene und der Arbeitsökonomie an akustische und optische Reize. (The demands of psychical hygiene and the work economy of acoustical and optical stimuli.) *Zsch. f. psychische Hygiene*, 1929, 2, 65-70.—*A. Römer* (Leipzig).

1498. *Kahn, E.* Modern problems in psychiatry. *Ment. Hygiene*, 1930, 14, 791-796.—For many years psychiatry was divided in its allegiance to the natural science methods of Krapelin and the psychological speculation of Freud. A conciliatory opinion now prevails. In almost all branches of psychiatry attention is being concentrated on the investigation of the personality. This is carried on with clinical, structural-analytical, psychoanalytical, and genetic methods. Neurology has only a superficial relationship to psychiatry and is essential only in assuring scientific method. The center of psychiatric education is the clinic.—*E. M. Ligon* (Union).

1499. *Kleist, K.* Gehirnpathologische und lokalisationistische Ergebnisse. 4. Mitteilung. Ueber motorische Aphasien. (Brain pathology and localizing

symptoms. Fourth contribution: Motor aphasia.) *J. f. Psychol. u. Neur.*, 1930, 40, 338-346.—*H. Marshall* (Stanford).

1500. *Laignel-Lavastine, —, & Schwob, —.* Préoccupation relative à la déprise de conscience du temps chez un psychasténique. (Preoccupation relative to the lessening of the consciousness of time in a psychasthenic.) *Encéph.*, 1930, 25, 231-235.—Presentation of a case of psychasthenia whose essential characteristic is a preoccupation arising from the patient's belief that he has lost the feeling of duration. This trouble did not affect the conduct of the patient. It only preoccupied him, and is to be related to the category of disorders attaching to feelings of emptiness.—*Math. H. Piéron* (Sorbonne).

1501. *Levi, L.* Sul decorso e la prognosi dell'encefalite epidemica nei ragazzi. (The course and prognosis of epidemic encephalitis in children.) *Quad. di psichiat.*, 1930, 17, 89-102.—Epidemic encephalitis appears in children in different forms from Parkinsonism to phrenasthenia. Character troubles are more frequent, particularly deceitfulness or violence, which is often not differentiated from constitutional immorality.—*G. C. Ferrari* (Bologna).

1502. *Lord, J. R.* American psychiatry and its practical bearings on the application of recent local government and mental treatment legislation, including a description of the author's participation in the First International Congress on Mental Hygiene, Washington, D. C., May 5-10, 1930. *J. Ment. Sci.*, 1930, 76, 456-495.—Lord, who was one of the British delegates to the congress, in this paper describes his participation in it, the part played by the British delegation, and his impressions of it. He also states his impressions of American psychiatry and compares it with that of his own country.—*E. M. Ligon* (Union).

1503. *Malzberg, B.* The prevalence of mental disease among Jews. *Ment. Hygiene*, 1930, 14, 926-946.—The purpose of this investigation is to test the prevalent opinion that Jews show an excessive frequency of mental disease. A statistical study is made of first admissions to New York civil state hospitals for the years 1914-1929. The results show that Jews have lower rates of first admissions to hospitals for mental disease than non-Jews. In every important psychosis non-Jews have higher rates than Jews. Jewish first admissions are younger than non-Jewish first admissions. Jews have a lower rate of criminal insanity. Some qualitative differences are cited.—*E. M. Ligon* (Union).

1504. *Marinesco, G.* Nouvelles contributions à l'étude de la forme tardive de l'idiotie amaurotique (type Bielchowsky) et à son mécanisme biochimique. (New contributions to the study of the delayed form of amaurotic idiocy (Bielehowsky's type) and to its biochemical mechanism.) *J. f. Psychol. u. Neur.*, 1930, 41, 1-42.—*H. Marshall* (Stanford).

1505. *Meyer, E.* Die gegenwärtigen praktischen und wissenschaftlichen Bestrebungen in der Psychiatrie. (The present practical and scientific trends in psychiatry.) *Dtsch. med. Woch.*, 1929, 55, 7-9.—(*Soc. Sci. Abst.* II: 16967).

1506. Miller, E. The analysis of agoraphobia. *Brit. J. Med. Psychol.*, 1930, 10, 253-267.—A case is described of a young married woman who had symptoms of claustrophobia, became agoraphobic, and then oscillated between the two. Cure was effected by psychoanalytic treatment. Many childhood episodes in reference to the father and mother were important. The guilt and hate motives and the restlessness engendered by lack of masculinity are nodal points in the case.—E. R. Hilgard (Yale).

1507. Minkowski, —. La notion du temps en psychopathologie. (The concept of time in psychopathology.) *Evolution psychiat.*, 1929, Ser. II, No. 1, 65-85.—The author, a Bergsonian, studies the experience of duration in mental disorders. He holds that with normal people intelligence and intuition are no longer separated but joined. In the mentally disordered this is not the case, and it may be that morbid factors act selectively upon intelligence and intuition, giving two types of disorders: the one characterized by a weakness of intuition and of the experience of time as well as by a consecutive hypertrophy of intelligence and of the criteria of the spatial order; the other characterized fundamentally by conditions opposite to the above.—Math. H. Piéron (Sorbonne).

1508. Murdoch, J. M. Fundamental principles involved in the organization and construction of an institution for the feeble-minded. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 239-251.—The first principle for constructing an institution for the feeble-minded is that of clearly stating the purpose for which it is to be erected, while bearing in mind the state-wide program of care and training for such children. In general, institutional space should be provided for 1 feeble-minded person to every 1,000 of the population served. Various details regarding selection of site and construction of buildings are enumerated.—M. W. Kuensel (Vineland Training School).

1509. Myerson, A. The pathological and biological bases of mental deficiency. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 203-225.—The different types of feeble-mindedness are said to differ essentially in pathology, etiology, and relation to heredity. By means of statistics the author shows that there is considerable physical defect in the feeble-minded; that the frequency of occurrence of infantile convulsions bears an inverse relationship to intellectual level; that syphilis is an insignificant factor in the causation of feeble-mindedness; that cretinism and Mongolism are not inherited; that the infection or cause of the convulsions which results in organic disease is the important thing and that other associated factors are fundamentally irrelevant; and finally that "the most important types of feeble-mindedness are, at least in large measure, due to environmental conditions." He postulates that "the environment is a factor in bringing about hereditary feeble-mindedness."—M. W. Kuensel (Vineland Training School).

1510. Neisser, C. Simons Kampf gegen die Nicht-verantwortlichkeit der Geisteskranken. (Simon's

struggle against the legal irresponsibility of the mentally sick.) *Allg. Zsch. f. Psychiat. u. psychische-gerichtliche Med.*, 1930, 43, 213-220.—A. Römer (Leipzig).

1511. Nicole, J. E. Psycho-pathology and the herd-instinct. *J. Ment. Sci.*, 1930, 76, 389-418.—The concept of mental energy in psychology, resulting in the various doctrines of instinct, has been essential to the advancement of psychopathology. Among the views of the nature and number of instincts, place has often been found for the "herd-instinct." The author reviews the main conceptions current in reference to a possible "herd-instinct." A glance is given to the standard authors in psychiatry and psychopathology in order to see to what extent a herd-instinct is recognized by them. The grounds are examined on which the theory of a herd-instinct rests. The conclusion is that the conception of a herd-instinct is ill-defined, vaguely described and variously applied—if applied at all. The grounds for its acceptance are not secure. The phenomena which give basis for its postulation have been explained by some schools without having recourse to such a postulation. There is little need in psychopathology for a herd-instinct, and to invoke any broad herd-system as a factor in mental derangement is to regard this factor as much more unitary and definite than it really is. The bibliography is limited to the 100 most representative works (written or translated into English) of those authors referred to in the text.—E. M. Ligon (Union).

1512. Penta, P. L'età dei genitori degli ammalati mentali. (The age of the parents of the insane.) *Riv. di pat. nerv. e ment.*, 1930, 35, 321-322.—The very young or very advanced age of the parents does not seem to be a cause of psychosis but only a concurrent factor whose force will vary with the hereditary character of the disease.—G. C. Ferrari (Bologna).

1513. Petré, A. Från riksdagen. (From Congress.) *Svenska läkart.*, 1930, 27, 1415-1422.—A continued report (see V: 410) of the discussions and resolutions passed in the Swedish Congress concerning the new law for the mentally diseased, which takes effect Jan. 1, 1931.—M. L. Reymert (Mooseheart Laboratory for Child Research).

1514. Petrie, A. A. W. Description of psychiatric and allied activities seen on an American tour. *J. Ment. Sci.*, 1930, 76, 419-455.—The author describes briefly such features as: cost of maintenance, medical and nursing staff, therapy, modes of admission, number of patients, discharge, and clinical work in general and mental hospitals, psychiatric clinics and reception units, observation wards, mental deficiency institutions, mental hygiene centers, child guidance centers, and child delinquency work associated with juvenile courts. The principal places visited were Montreal, Toronto, Chicago, Boston, Worcester, Wrentham, Washington, Baltimore, Philadelphia, New Haven, and New York City.—E. M. Ligon (Union).

1515. Robb, J. E. B. A study of incoordinate movement in epilepsy. *J. Ment. Sci.*, 1930, 76, 512-523.—In submitting the epileptic to the usual clin-

ical tests, incoordination may or may not be observed. A more accurate method of registering the speed and direction of movement is necessary. The writer describes such a piece of apparatus. The patient is instructed to follow a complex zigzag pattern on a wooden frame. A small light attached to his index finger records on a photographic plate the path traversed. The light flashes at regular intervals, thus recording also the speed of movement. Several records are shown, demonstrating normal and epileptic performances.—*E. M. Ligon* (Union).

1516. Ross, M. The genius of Clifford W. Beers. *Survey*, 1930, 64, 117-119.—A brief sketch of the life and work of the founder of the National Committee for Mental Hygiene.—*D. Grauer* (Chicago).

1517. Schaffer, K. Beitrag zur Insel-Linsenkern-aphasie. (Contribution to the study of aphasia due to defects in the island of Reil and the lenticular nucleus.) *J. f. Psychol. u. Neur.*, 1930, 40, 180-189.—*H. Marshall* (Stanford).

1518. Shaw, W. S. J. Some observations on the aetiology of dementia praecox. *J. Ment. Sci.*, 1930, 76, 505-511.—The writer states that he is convinced that inbreeding is an important cause of dementia praecox. He reaches this conclusion as a result of his experience of its peculiar prevalence among the Parsis of Bombay, among whom the intermarriage of cousins has been not only common but usual. The references include 18 titles.—*E. M. Ligon* (Union).

1519. Strecker, E. A. Psychiatric education. *Ment. Hygiene*, 1930, 14, 797-812.—The author attempts to delineate and prescribe psychiatric training for the general practitioner, the psychiatrist, and the nurse and social-service worker. The general practitioner needs more training in psychiatry and dynamic psychology. The psychiatrist needs less organic neurology and more dynamic psychology. The psychology of childhood and a study of the environment are especially emphasized. The psychiatric specialist must be a finished psychiatrist before he can be a specialist. The nurse should be given an exposition of the psychological needs of her patients by the department of psychiatry of the hospital. The social-service worker does not have in her preparation sufficient psychological and psychiatric training.—*E. M. Ligon* (Union).

1520. Turner, J. S. Need of reform in care and commitment of mentally sick; medical jurisprudence as it relates to proof of insanity. *Texas State J. Med.*, 1930, 25, 720-726.—(*Soc. Sci. Abst.* II: 16971).

1521. Vannelli, A. Somiglianze cliniche nelle forme iniziali della demenza precoce e dell'isterismo. (Clinical resemblances in the initial forms of dementia praecox and hysteria.) *Rass. di stud. psichiat.*, 1930, 19, 817-833.—The author presents 10 cases where the differential diagnosis of the two disorders has been impossible. He concludes that there are close relations between the two and that the so-called hysterical stigmata are not peculiar to hysteria.—*G. C. Ferrari* (Bologna).

1522. [Various.] Psycho-pathological references for 1929, English and American. *J. Ment. Sci.*, 1930, 76, No. 314.—This is a bibliography of psycho-

pathological references to English and American journals for the year 1929, compiled by the psychotherapy and psychopathology sub-committee. The list includes 284 titles from 19 journals.—*E. M. Ligon* (Union).

1523. Visconti Venosta, C. C. L'anormalità nel campo biologico, psicologico e sociale. (Abnormality in the biological, psychological and social fields.) *Riv. psicol.*, 1930, 24, 81-94.—An attempt at a stabilization of the bases for the research of criteria of normality and abnormality. Abnormality has a positive function in the evolution of the individual either because of external necessity or because of internal initiative.—*T. M. Abel* (Sarah Lawrence).

1524. Vurpas, C. Les formes cliniques des obsessions. (Clinical forms of obsessions.) *Presse méd.*, 1930, 38, 753-755.—An obsession is neither an ensemble of maladies nor a single malady, but it is a morbid manifestation common to various mental disorders. Obsessions may be connected with psychasthenia or manic-depressive psychoses (the main forms), or with dementia praecox and general paralysis, of which the obsessions may be the initial stage and with incidental mental symptoms of arteriosclerosis (the symptomatic forms), or the obsessions may evolve parallel to other psychoses or neuroses without any mutual conditioning (the combined forms).—*Math. H. Piéron* (Sorbonne).

1525. Wallace, G. L. Some observations on the requirements in a state program for the care of the mentally deficient. *Ment. Hygiene*, 1930, 14, 907-918.—The author states that it is important to build up in the community the ideal of providing education for its children on all mental levels. In training schools for the feeble-minded, academic training, hand training, and social training should be well correlated in accordance with the needs of the individual child. Hand training is strongly urged. Academic training should not be attempted above the mental level of the child. The mentally deficient should compete in games with normal children whenever they can do so on an equal basis. They should be given as much vocational training as possible. Social-service workers should help them find employment and adjust to their new environment. There is great need for further research in the understanding of mental deficiency.—*E. M. Ligon* (Union).

1526. Wallace, G. L. President's address. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 115-127.—The president cited three events which transpired during the year which were of world-wide significance to the study of feeble-mindedness. These were (1) the report of the British Mental Deficiency Committee, (2) the White House Conference with its section devoted to the physically and mentally handicapped, and (3) the meeting of the First International Congress on Mental Hygiene. He then reviewed the present program of the work with the mentally deficient under the following topics: identification, registration, education, supervision, segregation and scientific research.—*M. W. Kuensel* (Vineland Training School).

1527. Watkins, H. M. Selective sterilization. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930,

35, 51-65.—Sterilization is viewed not as a panacea but as only part of a program to be used in individually selected cases. Sterilization would probably be applicable to approximately 20% of those now in institutions. This selected group of high-grade imbeciles and morons could then be discharged and other needy cases taken in their place. It is estimated that less than 10% of the known feeble-minded in any state are now segregated in institutions. It is necessary to provide increased facilities for training more of the children, since community supervision is inadequate to meet the needs of certain groups. A broad program of public education is essential. At this time 24 states have sterilization laws. The Supreme Court of the United States has declared the Virginia law constitutional. By means of a questionnaire the author found that over 90% of the members of the American Association for the Study of the Feeble-Minded favor selective sterilization of mentally defective children.—*M. W. Kuensel* (Vineland Training School).

1528. Wefring, K. Sinssykeasylenes virksomhet. (Activities of mental hospitals.) *Norges offisielle stat.*, 1929, 8. Pp. 42.—(*Soc. Sci. Abst.* II: 16962).

1529. York, R. A. The place of the feeble-minded in industry. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 227-237.—Placement after training at the Rome State School is accomplished through the channels of colony life. The activities of the various types of industrial and farm colonies are discussed. Colony life raises to a significant extent the social and economic standards of the high-grade feeble-minded. As a result many become socially self-sufficient in work involving unskilled labor.—*M. W. Kuensel* (Vineland Training School).

1530. Zwirner, E. Beitrag zur Sprache der Depressiven. (Contribution on the speech of depressives.) *J. f. Psychol. u. Neur.*, 1930, 41, 43-49.—*H. Marshall* (Stanford).

1531. Zwirner, E. Psychologisch-phonetischer Beitrag zur Sprache der Depressiven. (Psychological-phonetic contribution on the speech of depressives.) *J. f. Psychol. u. Neur.*, 1930, 41, 96-102.—*H. Marshall* (Stanford).

[See also abstracts 1399, 1432, 1470, 1535, 1544, 1566, 1571, 1647, 1661, 1679, 1692, 1706.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

1532. Abel, J. F. A graphic presentation of statistics of illiteracy by age groups. *U. S. Office Educ.*, 1930, No. 12. Pp. 14.—A proportional area graph is suggested and illustrated for several countries, which makes possible a quick and easy understanding of illiteracy statistics.—*C. M. Louttit* (Ohio).

1533. Alexander, F. Mental hygiene and criminology. *Ment. Hygiene*, 1930, 14, 853-882.—The author's remarks have reference to the psychology of the criminal in the light of psychoanalysis. All discontent in life increases the tendency to disregard the existing order. Adjustment to the demands of society requires an ever-increasing restriction and

renunciation of the instincts. Adjustment is possible only if this renunciation is compensated for by increased satisfaction. The two great instincts for which the most renunciation is required are hunger and love. Conflicts in these drives begin in early childhood. The tendency to criminal behavior is acquired when these conflicts are unresolved. Present criminal procedure is endeavoring to find the causes of crime in rational and utilitarian aims, whereas often they are in unconscious childhood repressions. Punishment does not bring renunciation, and so is effective only when the authority is present. Our present civilization needs to find vents for the dammed-up libido that has been repressed from childhood.—*E. M. Ligon* (Union).

1534. Allen, C. N. Recent studies in sex differences. *Psychol. Bull.*, 1930, 27, 394-407.—A review of the recent literature of 137 titles arranged under the topics: general; physical differences; mental differences; conclusion.—*J. F. Dashiell* (North Carolina).

1535. [Anon.] Heilung von verbrecherischer Veranlagung. (Cure for criminal tendencies.) *Zentbl. f. Psychotherap.*, 1930, 10, 573-582.—Report on and partial reprint of an article by Albrecht Böhme, published in *Krim. Monatsh.*, Aug., 1930. Böhme stresses the fact that up to the present no final statement as to the curability of all criminal tendencies can be reached. He is, however, certain that sex offenses as well as drug and alcohol addicts may in a great number of cases be cured, provided they wish to be cured (*Heilungswille*). In support of this statement he cites numerous case histories of patients who were restored to normality and who have not had any relapses. Reference to Stekel's *Ist Homosexualität heilbar?* Contrary to the opinion of Boeters, Böhme is not at all in favor of castration. He thinks it undesirable from every point of view and proposes that it should only be resorted to in cases where psychotherapeutic or psychoanalytical treatment has been found ineffective. Proposed legal reforms: (1) Every sexual pervert who has come before the courts should be notified of the possibility of a cure. (2) If he wishes to be treated for his abnormality he should be put on probation. The physician who undertakes the treatment must be under obligation to notify the court in case of failure or of the patient's discontinuing the treatment. Böhme regrets that there are so few well-trained psychiatrists who are experienced enough to assist in his proposed reforms. However, as a result of the article the police department of Berlin and the medical association (*ärztliche Gesellschaft*) of that city have begun to cooperate.—*C. W. Brown* (California).

1536. Bárány, E. Kortikaler Mechanismus der Sprache. Ein Konstruktionsversuch. (Cortical mechanism of speech. An attempt at hypothetical explanation.) *J. f. Psychol. u. Neur.*, 1930, 40, 282-297.—*H. Marshall* (Stanford).

1537. Barbour, C. E. Sin and the new psychology. New York: Abingdon, 1930. Pp. 269. \$2.00.—It is the purpose of this book to show that the method of the psychoanalyst is the same as that of

Christianity, the one employed to combat mental ills, the other to combat sin. Sin is defined as the conscious or unconscious deviation from the ideal presented by Christ. The unavoidable acts of the neurotic are also sin, but this is without guilt. The sense of guilt, which results from the working of conscience, is the distaste we have for morally wrong acts, and is a necessary factor in the processes of integration and growth. In the treatment of repression is found a close parallel to the confession of sin, while the transference of an emotion from a patient's dissociation to the person of the psychoanalyst is similar to the love of a convert towards Christ. In religion as in psychoanalysis faith is the most essential factor in the mending process. Neither the theological nor the scientific aspect of the subject is allowed to weaken in the course of treatment. The book is replete with references to Freud, Jung, Adler and McDougall, with chapter and verse given as freely as with references to St. Paul, Matthew, Luke and John.—*J. P. Hylan* (Stoneham, Mass.).

1538. Bendann, E. Death customs. An analytical study of burial rites. New York: Knopf, 1930. Pp. xiii + 304. \$5.00.—A detailed and thoroughly documented analysis of the death-complex as it exists in Melanesia, Australia, north-east Siberia, and India. The author finds that the only elements exclusively characteristic of the death situation are mourning customs as such and ideas concerning life after death. She believes that genetically the complex is "a more or less adventitious conglomerate of heterogeneous elements of culture, the specific content . . . being in each special case traceable to specific historic and sociological determinants." Although there is unity in the death-complex of a given group, the associations are formed as a result of sociological and psychological factors and not because of any genetic relationship between the elements of the complex themselves. Extensive bibliography.—*N. L. Munn* (Pittsburgh).

1539. Bodkin, M. Archetypal patterns in tragic poetry. *Brit. J. Psychol.*, 1930, 21, 183-202.—Jung attributes the special emotional significance possessed by certain poems to the stirring within the reader's mind of unconscious forces termed by him "primordial images" or archetypes. These archetypes he regards as "psychic residua of numberless experiences of the same type," happening not to the individual but to his ancestors, the results being inherited in the structure of the brain, and, a priori, determining individual experience. This paper aims at examining this hypothesis in connection with examples concerning which it can bring together the recorded experiences and reflections of minds which approached the matter from different standpoints. The writer uses the term *archetypal patterns* as referring to that within us which, in Gilbert Murray's words, leaps in response to the effective presentation in poetry of an ancient theme. Rejecting Spearman's separation of the intellectual aspect of imaginative activity from its emotional nature, she goes on to examine whether there are archetypal patterns whose "almost eternal durability" render them of special significance to students of psychology and literature.

This leads to a consideration of the underlying emotional patterns of *Hamlet* and the Greek plays concerned with Orestes. The link between the two is the Oedipus complex motif, both of them being examples of the imaginative expression of the ambivalent attitude of child toward parent, i.e., of the inevitable emotional conflict between the generations. But briefly, the archetypal patterns corresponding to tragedy may be said to be a certain organization of the age-old tendencies of self-assertion and submission; from the tension of the two impulses and their reaction upon each other under the conditions of poetic exaltation, the distinctive tragic attitude and emotion appear to arise. An important factor in the total experience of tragic drama is the "racial" or "collective" experience of the "social inheritance," into awareness of which, by means of the mediation of the play, one is initiated.—*M. Drury-Smith* (Cambridge, England).

1540. Brunner, E. de S. Foreign-born farmers and their children. *Amer. Sociol. Soc. Papers*, 1930, 24, 211.—(*Soc. Sci. Abst.* II: 16823).

1541. Burckhardt, G. Die Aufgabe einer Geschichte des Bildungswesens im Zusammenhang mit der Entwicklung der Kulturphilosophie. (The task of a history of culture in connection with the development of cultural philosophy.) *Dtsch. Blät. Erziehenden Unterricht*, 1930, 57, 337-342.—*A. Römer* (Leipzig).

1542. Burgess, E. W. The cultural approach to the study of personality problems. *Amer. Sociol. Soc. Papers*, 1930, 24, 264.—(*Soc. Sci. Abst.* II: 16732).

1543. Carr, L. J. Experimentation in face-to-face interaction. *Amer. Sociol. Soc. Papers*, 1930, 24, 174-176.—(*Soc. Sci. Abst.* II: 15638).

1544. Colucci, C. Contributo alla semiotica della scrittura. (Contribution to the symptomatology of writing.) *Riv. di pat. nerv. e ment.*, 1930, 35, 91-95.—The author has used an instrument of his own invention for the study of the psychology of writing. In this article he shows the importance of these studies for neurological symptomatology.—*G. C. Ferrari* (Bologna).

1545. Daly, C. D. The psychology of man's attitude towards woman. *Brit. J. Med. Psychol.*, 1930, 10, 278-288.—Woman's chief reasons for wanting to be a man are the envy of man's greater social freedom, and the absence in the male of the disgusting elements associated with the feminine taboos (menstruation, pregnancy, parturition), the latter being the primary cause of woman's sense of inferiority. Many complexes formerly belonging to puberty have been displaced to earlier genital levels via those in-born tendencies associated with the suppression of incest.—*E. R. Hilgard* (Yale).

1546. Dennis, W. V. A report of a study of organizations affecting farm youth in three areas in Pennsylvania. *Amer. Sociol. Soc. Papers*, 1930, 24, 193-201.—(*Soc. Sci. Abst.* II: 16824).

1547. De Saussure, E. Fragments d'analyse d'un pervers sexuel. (Fragments of the analysis of a sexual pervert.) *Rev. fr. de psychanal.*, 1929, 3,

631-680.—This is the partial analysis and discussion of a case of sexual perversion in a neurotic married man of 31 who had never had normal sex relations. Sex satisfaction was obtained in various narcissistic ways and the subject also showed some sadistic, masochistic, and fetishistic tendencies. He was one of six children, all of whom manifested psychopathological peculiarities, and the heredity was also abnormal in this respect. The patient's difficulties are explained on the basis of a strong castration complex, among other complexes, bringing it about that the patient can never satisfy his erotic impulses directly, but can only eroticize, secondarily, the inhibiting forces, so that he obtains his greatest satisfaction when he is resisting satisfaction most strongly. His conflicts are fixed in an anxiety hysteria. The anxiety is sufficiently compensated, however, so that the patient makes a fairly good adjustment to reality except in the field of sexuality. The analysis was incomplete, but showed interesting psychoanalytic mechanisms which appeared to merit discussion.—*E. M. Pilpel* (New York City).

1548. *Dono', G. Lo delinquenza negli affari secondo la psicologia criminale e la polizia giudiziaria.* (Criminality in business according to criminal psychology and the judicial police.) Turin: Bocco, 1928. Pp. 203. L. 15.—The book is devoted to the psychologically neglected topic of crimes of fraud. In the beginning the author considers fraud and the history of law, the psychology of fraud (very different from that of violence), fraud in literature and the theater, the frauds of charlatans, miracle-workers, and adventurers, and the forms of investigation in cases of fraud. Study is next made of all the different sorts of crime by fraud, cheating, forgery, counterfeiting, adulteration, and fraudulent imitations. In conclusion the facts described are related to Italian penal law.—*M. Ponso* (Turin).

1549. *Essertier, D. Philosophes et savants français du XX^e siècle. V. La sociologie.* (French philosophers and savants of the 20th century. V. Sociology.) Paris: Alcan, 1930. Pp. 450. 30 fr.—This volume is connected with the preceding one (*Psychology*) in that the author looks upon sociology as an extended and definite form of psychology. The first chapter is devoted to the reaction against individualism and to the early attempts at an objective sociology. He gives the doctrines of three sociologists with extracts from their works: Alfred Espinas, *Les sociétés de jeunes chez les animaux*; Adolphe Coste, *Esquisse d'une sociométrie*; and Jean Izoulet, *La société transforme l'anthropoïde en homme*. Chapter II deals with the theory of collective representations: Emile Durkheim, Lucien Lévy-Bruhl, C. Bourglé, Marcel Mauss, Henri Hubert, Paul Fauconnet, Maurice Halbwachs, and Georges Davy. He gives 15 excerpts and devotes a bibliographical review to the authors forming the group found in the *Année Sociologique*. In the third chapter he discusses the theories of inter-mental actions and the criticism of sociological realism. He gives excerpts from Gabriel Tarde, René Worms, Gaston Richard, Raoul Allier, and René Maunier. The fourth chapter is devoted to the school of social sci-

ence (Edmond Demolins and Paul Bureau). The fifth chapter takes up those authors who are both sociologists and psychologists: Henri Wallon, Georges Dumas, Charles Blondel, and Henri Delacroix. The last chapter, the purpose of which is to point out the importance of a contact between sociology and various social sciences, deals successively with the linguists (A. Meillet, F. Brunot, and J. Vendryes), the geographers (L. Febvre, and A. Cholley), historians (P. Lacombe, Henri Berr, and M. Granet), jurists (L. Duguit, M. Haurion, E. Lévy, and P. Huvelin), and economists (F. Simiand). There is no bibliography, though there are many references during the course of the book in connection with each author.—*Math. H. Piéron* (Sorbonne).

1550. *Ferguson, M. B. Laughter and its place in social case work.* *Family*, 1930, 11, 19-24.—A review of the theories of laughter and a plea for the more frequent use of laughter-producing devices in case work technique as an aid in reducing tension and inducing an objective attitude in clients of social agencies. Examples from case records are given.—*D. Grauer* (Chicago).

1551. *Flügel, J. C. The psychology of clothes.* London: Hogarth, 1930. Pp. 256. 21/.—Starting with the premise generally agreed upon by psychologists, that clothing serves the threefold purpose of protection, modesty and decoration, the author says "the essential opposition between the two motives of decoration and modesty is, I think, the most fundamental fact in the whole psychology of clothing. It implies that our attitude towards clothes is *ab initio* 'ambivalent,' to use the invaluable term that has been introduced into psychology by the psychoanalysts; we are trying to satisfy two contradictory tendencies by means of our clothes, and we therefore tend to regard clothes from two incompatible points of view—on the one hand, as a means of displaying our attractions, on the other hand, as a means of hiding our shame." (See also IV: 4742.) Other points of discussion are individual differences, sex differences, types of dress, forces of fashion, vicissitudes of fashion, the evolution of garments, the ethics of dress, and the future of dress. Suggestion is made that researches on the esthetic, hygienic, technical, and economic aspects of the clothing problem, as well as the aspect of convenience, should be conducted. Taking as a principle in the consideration of clothing that "clothes should provide the maximum of satisfaction in accordance with the full maximum of reality" and considering the various aspects of clothing in the light of this principle, the author decides that "we must admit that the very existence of clothing for purposes of modesty or decoration implies that the conditions of our standard are but incompletely fulfilled" and that "we must honestly face the conclusion that our principle points ultimately, not to clothing, but to nakedness." In the meantime, we should apply ourselves to "an honest review of our present position, and a reconnoitring along the path of future progress."—*J. C. Spence* (Clark).

1552. *Garth, T. B. A review of race psychology.* *Psychol. Bull.*, 1930, 27, 329-356.—176 titles are re-

viewed under the headings: trends; popular, theoretical, and anthropological treatments; experimental and statistical. The last-named are analyzed also in tabular forms, in one table arranged by dates and investigators, in another by racial groups.—J. F. Dashiell (North Carolina).

1553. Gernet, M. *Psikhologia pobegov ie tyurem.* (The psychology of prison escapes.) *Problemi prestupnosti*, 1929, No. 4, 58-78.—(Soc. Sci. Abst. II: 16907).

1554. Grammont, M. *La psychologie et la phonétique. III. La phonétique impressive.* (Psychology and phonetics. III. Impressive phonetics.) *J. de psychol.*, 1930, 27, 544-613.—The impressive value of various phonetic devices is discussed at length. Particularly stressed is the significance of onomatopoeic expressions. The author believes that these imitative expressions have played an important rôle in the evolution of phonetics. He points out, however, that the onomatopoeic words are never exact reproductions of the original sounds. They undergo an evolution, furthermore, during which they pay obeisance to the other phonetic expressions and thus lose certain of their own expressive values. The author draws his illustrations from French and Latin literature.—N. L. Munn (Pittsburgh).

1555. Guidetti, I. *Psicologia dei pessimisti moderni.* (The psychology of modern pessimists.) *Riv. psicol.*, 1930, 24, 31-41.—A philosophical discussion. Modern pessimism is a hypersensitive phenomenon of a highly synthetic intelligence.—T. M. Abel (Sarah Lawrence).

1556. Halbwachs, M. *Les causes du suicide.* (The causes of suicide.) Paris: Alcan, 1930. Pp. 520. 70 fr.—The author makes a very complete statistical study of the causes of suicide. He discusses the methods used for listing the suicide cases in the different European countries and outlines the modes of suicide, their varieties, and the distribution of each kind in the different European countries. Passing to cases of attempted suicide, he studies the frequency of each mode, the differences in relation to sex and age, and gives a comparison between cases in civil and military life. He shows the distribution in Europe, investigates the various environmental influences, i.e., town or country, family or solitary life, and religion, devotes a chapter to the study of the relations between suicide and homicide, and considers the influence of economic and political crises, wars, the development of mental sicknesses, and alcohol. There is a very brief bibliography.—Math. H. Piéron (Sorbonne).

1557. Hardy, G. *De la gaieté chez les noirs d'Afrique.* (Gaiety among the African blacks.) *Outre-Mer*, 1930, 2, 37-40.—(Soc. Sci. Abst. II: 15778).

1558. Haydon, A. E. *Spiritual (religious) values and mental hygiene.* *Ment. Hygiene*, 1930, 14, 779-790.—The author asserts that the drive of desire for satisfaction is the motif of the drama of evolution on our planet. The religions of the world are ways of winning satisfaction. But in every religion man's hopes outrun his powers and he must resort to power-

ful gods, other-worldliness, and life after death. This is no longer necessary, because the social and psychological sciences offer the long-needed understanding of human nature which makes possible the complete fulfillment of personality, the realization of full joy in living. The most important task that lies before the religious scientist today is the mastering of the maladjustments of the social-economic relationships, which have been multiplied in number and seriousness by our modern scientific civilization.—E. M. Ligon (Union).

1559. Healy, W. *The devil's workshop where criminal ideas are hatched and young delinquents are spawned.* *Century*, 1930, 120, 122-132.—(Soc. Sci. Abst. II: 16909).

1560. Hesnard, A. *Psychologie de l'homosexualité masculine.* (The psychology of masculine homosexuality.) *Evolution psychiât.*, 1929, Ser. II, 47-61.—Math. H. Piéron (Sorbonne).

1561. Hevner, K. *Tests for esthetic appreciation in the field of music.* *J. Appl. Psychol.*, 1930, 14, 470-477.—Nineteen musical phrases selected from standard compositions were played in the original form and in three "spoiled" versions before groups of psychology students and harmony students who were asked to record their "best" and "second best" choices among the versions of each phrase. A fairly significant differentiation between the harmony students and the psychology students was found. Several revisions are needed to make the test of definite diagnostic value.—G. L. Barclay (Syracuse).

1562. Innakei, K. *K probleme proiskhozhdeniya yaeika.* (The problem of the origin of language.) *Vestnik kommunisticheskoi akademii*, 1929, 33, 112-144.—(Soc. Sci. Abst. II: 15756).

1563. Khalafin, V. *Zhilishchnii vopros i imushchestvennaya prestupnost v gorodakh RSFSR.* (The housing problem and criminality in the cities of R. S. F. S. R.) *Problemi prestupnosti*, 1929, No. 4, 19-23.—(Soc. Sci. Abst. II: 16912).

1564. Kothe, A. *Das Problem der Arbeit in den Gefangenenanstalten.* (The problem of work in prisons.) *Monatssch. f. Krim.-psychol. u. Strafrechtsref.*, 1930, 21, 342-348.—(Soc. Sci. Abst. II: 16571).

1565. Kremleva, T. *Vori i vorovki bolshikh magacinov.* (Male and female shoplifters.) *Problemi prestupnosti*, 1929, No. 4, 24-38.—(Soc. Sci. Abst. II: 16913).

1566. Kronfeld, A. *Religion und Psychotherapie.* (Religion and psychotherapy.) *Zentbl. f. Psychotherap.*, 1930, 3, 519-539.—Many attempts to combine the practice of religion and psychotherapy are cited. The characteristics of psychotherapy are its evolutionary point of view and its heuristic method of treatment, expressed in the development of a technique of life-history taking. The function of the psychoanalyst is so to interpret the wealth of material brought to light by the technique of life-history taking that the patient may himself reorganize it into a more unified whole. Although the biological point of view is incompatible with the spiritual, religious point of view, psychotherapy and religion

do have a mutual point of departure—the person in mental distress. Researches in psychotherapy reveal that the mental substructure of conflict between the instinctive demands and the ideals, with its resultant inferiorities, defenses, etc., is common to all mankind. This revelation automatically differentiates psychotherapy from formal medicine and pathology, and puts it into closer relationship with the religious cure of souls, which has always recognized the common humanity of sinners. Besides the similarity of the task for both, we note that psychotherapy has taken over from religion its remedy—confession, conversion, and transformation. A difference appears, however, between the object of the confessor and that of the psychiatrist; the former wishes to reconcile the patient with God, the latter to bring him to mental health. Other differences are the tremendous advantage which the confessor enjoys by virtue of his office, the comfort and consolation which he offers as a reward for reconciliation with the love of God, and his judicial capacity, in which he is required to exhibit the sins and faults of the patient as such and to hold them up as warnings. The psychoanalyst must justify himself on his own merits in the eyes of the patient; he can honestly offer no comfort and consolation if not through the patient's own working out of his problems, and with that accomplishment, no comfort nor consolation is necessary; he avoids most cautiously the making of judgments for the patient, but tries to lead the patient to formulate his own judgments. This latter requirement of psychotherapy may lead to a practical Nietzschean pragmatism, may set up a value-free goal. But the fact that the analyst forcibly restrains himself and relinquishes the life decision to the autonomy of the personality reveals a real guiding principle or goal, which is the health of the patient, exactly the end which the confessor also seeks, in practice. So it becomes merely a matter of expediency which to consult, the confessor or the psychoanalyst. Theoretically, the psychoanalysts have not developed a satisfactory anthropology. Psychotherapy will take over what it can from religion in the matter of human suffering and methods of redemption, but it will never sanction salvation from the encounters of life or resignation to them. It will demand solution of them, and it will avoid fanaticism.—R. G. Sherwood (Redmond, Wash.).

1567. Krupenina, M. *Das Gesicht der Kulturrevolution.* (Aspect of the culture revolution.) *Werdende Zeitalter*, 1930, 9, 477-480.—A. Römer (Leipzig).

1568. Lenoir, R. *Les réflexions sur les beaux-arts et la politique chez Beyle.* (Reflections concerning fine arts and politics in Beyle.) *J. de psychol.*, 1930, 27, 646-667.—An encomium of Beyle's philosophy.—N. L. Munn (Pittsburgh).

1569. Luquet, G. H. *L'art primitif.* (Primitive art.) Paris: Doin, 1930. Pp. 266. 30 fr.—Under the name of art the author considers chiefly art as expressed in forms, and he uses the term *intellectual realism* in his definition of the primitive form of art as found in the present civilized person. The study is divided into three parts: the genesis of graphic

art, intellectual realism, and the primitive types of graphic narration. There is a reference index of 233 titles.—Math. H. Piéron (Sorbonne).

1570. McCormick, M. J. *A scale for measuring social adequacy.* *Soc. Sci. Monog.*, 1930, 1, No. 3. Pp. 73.—This study is based upon the premise of human inequality. It is an attempt to discover the factors of social adequacy and to devise a measuring scale adapted to a study of it, with a hope that such a scale would be of value in all forms of social work and social legislation. Previous studies were utilized as far as they contributed to the experiment. The study has resulted in the setting up of tentative norms and directions for using the scale have been appended.—E. V. Brill (Malone, N. Y.).

1571. Montague, H. *The causes of delinquency in mentally defective boys.* *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 104-113.—Statistics of mentally defective delinquents and those of normal delinquent boys were taken from the records of the Psychiatric Clinic of the Children's Court of New York. A little less than 1% of the school boy population of New York was found to be delinquent. The percentage of mentally defective delinquents in the Children's Court was only about twice as great as in the school population. Although there were more burglaries, unlawful entries, and stealing cases among defectives, on analysis the acts of only 9% were serious as compared with 30% of normal boys. Causes underlying their difficulties were discussed under the following headings: physical condition, nativity, broken homes and maladjustment at school. The prominent causes of delinquency, according to the author's view, are broken homes, brutal treatment, feeble-mindedness and crime on the part of the parents, plus the boys' lack of school adjustment. Approximately one-third of the mentally defective delinquents passing through the Clinic were committed to an institution. The others were adjusted through special work with their homes, schools, and recreational centers.—M. W. Kuenzel (Vineland Training School).

1572. Mukherji, K. C. *Is gregariousness an instinct?* *Indian J. Psychol.*, 1930, 5, 19-23.—An elaboration of the full meaning of sensitiveness, which Trotter in his *Instincts of the Herd in Peace and War* denominates as "the cardinal mental characteristic of the gregarious animal." Implicit in the concept of gregariousness are sympathy, suggestibility, and imitativeness, all three of which are elucidated.—L. A. Averill (Worcester State Normal School).

1573. Niceforo, A. *La personalità et le langage; le parler des hommes mediocres, la conversation, le style personnel.* (Personality and language; the speech of mediocre men, their conversation and personal style.) *Riv. psicol.*, 1930, 24, 1-21.—A discussion of the individual or biopsychical and of the social factors that determine the language and the modes of speech of the average man.—T. M. Abel (Sarah Lawrence).

1574. Nichols, M. S. *The contribution of case work to the "hygiene" of living.* *Family*, 1930, 10, 275-279.—Social case work has contributed to the

development of personality by direct contact with individuals, spreading knowledge to these individuals as well as adding to the store of knowledge by case records.—D. Grauer (Chicago).

1575. Nilsson, M. P. Ueber die Glaubwürdigkeit der Volksüberlieferung mit besonderem Bezug auf die alte Geschichte. (On the degree of confidence which may be placed in popular tradition, with special reference to ancient history.) *Scientia*, 1930, 48, 319-328.—Points out some difficulties in evaluating traditions.—R. G. Sherwood (Redmond, Wash.).

1576. Peterson, J., & Telford, C. W. Results of group and of individual tests applied to practically pure-blood negro children on St. Helena Island. *J. Comp. Psychol.*, 1930, 11, 115-144.—The authors administered certain standardized group tests and five individual tests—Rational Learning, three Pintner-Paterson performance tests, and the Porteus Mental Maze. Results by the group tests—Otis Primary, Haggerty Delta I, Goodenough draw-a-man picture test, Otis S.-A. Intermediate, and the Digit-Symbol and the Symbol-Digit tests—show enormous differences, due, to a large extent, to inadequate training and background of the children. The individual test results, analyzed in considerable detail as to reliability and to the size of differences by different tests given in terms of standard scores (therefore directly comparable), show that in Rational Learning there is a reliable difference between the median of the island negroes and that of Nashville whites of equal age. This difference amounts to 1.87 probable errors of the whites' distribution (P.E._w). There is also a reliable but smaller difference (1 P.E._n) between the medians of the island negroes and of Nashville negroes of the same age; but industrial school children did not excel the other island negroes. The Two-Figure Form Board and the Healy Puzzle "A" also made large and reliable differences between the island negroes and the whites of equal age tested by Pintner in Ohio, differences of 2.45 P.E._w and 1.72 P.E._w, respectively; but since these tests were less reliable than the Rational Learning problem (.51 and .22, respectively, as compared with .56) the corrected difference between race medians by these tests was over 3 P.E._w. The Mare and Foal test revealed no race differences. No reliability of this test was available or obtained. Of the performance test and the Porteus Maze, only the Mare and Foal showed a reliable difference between the Penn School and other island children. Of the three individual tests given twice, Rational Learning showed the least practice effect and also the greatest reliability. Obviously the larger differences found by the performance tests between the racial medians and also between those of the Penn School and the other island negro children are to a large extent due to measuring cultural factors. The authors do not pretend to measure pure innate differences with any test.—J. Peterson (Peabody).

1577. Patrizi, M. L. Aggiunzioni al "Dopo Lombroso." Ancora sullo monogenesi psicologica del delitto. (Additions to the *After Lombroso*. More concerning the monogenesis of crime.) Milan: Soc. Ed. Libreria, 1930. Pp. 271.—In this new volume

the author returns to the arguments of his book *Dopo Lombroso* (Milan, 1916) and adds a new collection of documents and observations to his thesis of a monogenesis of crime. On the one hand the author recognizes that there is a foundation of truth in the doctrine of Lombroso in that crime is atavistic; but on the other hand the author indicates that Lombroso's fundamental error lay in taking the legal configurations of the crime for psychological peculiarities, in treating them as anatomical types. The author indicates the urgency of classifying crime, corrigibility and incorrigibility, punishment, and pardons not according to the action of the criminal but according to the motivation and need which gave rise to the crime. The classification of criminals proposed by the author in 1911 is based upon the feelings. The criminal is not an anatomical mask or the result of an endocrine mixture. His physiognomy, constitution and glands he has in common with honest men. His acts are only a functional variation of those of honest men. The stimulus-feeling is as much the point of departure for abnormal and asocial action as for the contrary behavior. But in this latter case, feeling and desire, in order to be satisfied, must follow the "via crucis" prescribed by intelligence, moral education, and inhibition. Crime, when it takes a form which seems to differentiate it from primitive self defense, competition, and rivalry, is always an emotional defense reaction. In the second chapter (the human stage of criminality) and in the fourth (the criminality of the individual and that of the species) one finds in particular the fundamental characteristics of the author's doctrines and their applications to diverse offenses.—M. Ponso (Turin).

1578. Pende, N. Psicologia individuale e psicologia di razza. (Individual and racial psychology.) *Riv. psicol.*, 1930, 24, 22-26.—The author finds in racial as well as in individual psychology the presence of two categories of biotypes, tachypsychical and bradypsychical. He recognizes that in certain races the qualities of the first type predominate, whereas in other races the second type is more apparent. He admits, however, that no nation today is constituted of a single race.—T. M. Abel (Sarah Lawrence).

1579. Pihlblad, C. T., & McCullough, E. Family background and college records. *Ohio Soc. Sci.*, 1930, 2, 32-39.—(*Soc. Sci. Abst.* II: 16725).

1580. Pratt, G. K. Some of the psychopathology of marital maladjustment. *Amer. J. Psychiat.*, 1930, 9, 861-870.—Marital dissatisfactions are due to deeply lying mechanisms for which neither party to the marriage is responsible. Among these mechanisms are: emotional immaturity; excessive narcissism in either or both parties; sadism, excessive or insufficiently neutralized by masochism; homosexual trends; unwisely directed will to power; frigidity and impotence. There is evidence that these personality traits are produced in the childhood of the individuals by unwholesome parental attitudes, thus shifting the marriage problem to the early lives of the partners.—S. J. Beck (Boston Psychopathic Hospital).

1581. Reitz, G. Experimentelle Untersuchungen an Gesunden und Geisteskranken über die Fähigkeit, Wertungen zu vollziehen. (Experimental investigations of the valuational ability in normal and pathological subjects.) *Zsch. f. angew. Psychol.*, 1930, 37, 193-203.—A study dealing with the influence of social status upon judgments of the major virtues and vices. Estimates were obtained from the following five classes of subjects, in which sound and disordered minds were indiscriminately mixed: (1) bourgeois (100 cases); (2) physicians (50); (3) intellectuals (100); (4) peasants (100); (5) proletarians (100). The mean descending order of merit of the virtues for all classes was: justice, truth, kindness, courage, modesty, temperance, industry. For the vices, the descending order of reprehensibility was: deception, cruelty, injustice, cowardliness, laziness, intemperance, pride. Cruelty is strongly condemned by the upper classes, but much less so by the lower. Laziness is most sharply disapproved by the proletariat, and immoderation by the peasants; the author sees in this a striking case of vital conditioning. The high rank of kindness with the bourgeois-intellectuals is viewed as an index of the extent to which they are protected from the dangers of life. Our personality structure is conditioned by the material milieu. Along with recognized unconditional and constant values—justice and truth are ranked high by all classes—there exists a larger group of unstable vices and virtues.—G. W. Hartmann (Berlin).

1582. Reuter, E. B. Civilization and the mixture of races. *Scient. Mo.*, 1930, 31, 442-449.—Both the school that holds racial stocks to be unequal in capacity for cultural achievement and the school that emphasizes the desirability of racial amalgamations assume that culture is a function of race.—J. F. Dashiell (North Carolina).

1583. Reynolds, C. N. Newspaper treatment of oriental-white race relations. *Amer. Sociol. Soc. Papers*, 1930, 24, 150-152.—(*Soc. Sci. Abst.* II: 16837).

1584. Social attitudes and public opinion. *Amer. Sociol. Soc. Papers*, 1930, 24, 242.—(*Soc. Sci. Abst.* II: 16727).

1585. Richard, G. La pathologie sociale d'Emile Durkheim. (Emile Durkheim's social pathology.) *Rev. int. de sociol.*, 1930, 38, 113-126.—(*Soc. Sci. Abst.* II: 16917).

1586. Robinson, V. P. Educational problems in preparation for social case-work. *Ment. Hygiene*, 1930, 14, 828-836.—The author emphasizes the necessity for an increasing amount of field work in the two-year training course of the social case-worker. She objects to the assumption that the theory of social case-work can be learned intellectually and later put into practice, and that the technique of social case-work can be mastered without knowing its underlying philosophy. The knowledge that is essential in social case-work is useful only when the student accepts its emotionally and incorporates it into his own thinking. This is possible only when there is a close integrating of field and class work.—E. M. Ligon (Union).

1587. Ruiz-Funes, M. Endocrinología y criminalidad. (Endocrinology and criminality.) Madrid: Javier Morata, 1929. Pp. 352.—(*Bibliographia Eugenica*).

1588. Russell, B. Ehe und Moral. (Marriage and morals.) (Trans. by M. Kahn.) Munich: Drei Masken Verlag, 1930. Pp. v + 248. M. 4.50.—W. S. Hunter (Clark).

1589. Scofield, C. F. The study of human welfare. *Gamma Alpha Rec.*, 1930, 20, 60-64.—A description of the Human Welfare Group at Yale.—C. M. Louttit (Ohio).

1590. Scripture, E. W. Ein Fall von Dissoziation der Energiefaktoren der Betonung. (A case of dissociation of the energy factors of the voice tones.) *Vox*, 1930, 16, 69-72.—A. Römer (Leipzig).

1591. Segond, J. Le problème du génie. (The problem of genius.) Paris: Flammarion, 1930. Pp. 283. 12 fr.—After a statement of the problem and an endeavor to find a definition of genius, the author discusses its field (genius and science, artistic genius, religious genius, heroism and genius). He examines its degrees and on what its physiology depends (genius and heredity, genius and cenesthesia, genius and neuroses, and genius and psychoanalysis). He reviews what the man of genius might owe to chance, inspiration, or to training, indicating that he needs a certain kind of technique for self-realization.—Math. H. Piéron (Sorbonne).

1592. Sherman, M. Environment and mental development. A study of an isolated community. *J. Amer. Asso. Univ. Women*, 1930, 23, 137-140.—(*Bibliographia Eugenica*).

1593. Snyder, E. D. Hypnotic poetry. Philadelphia: Univ. Pennsylvania Press, 1930. Pp. 173. \$2.00.—There is a kind of poetry (fully described and illustrated) which depends for its effect upon psychological changes in the listeners analogous to and probably identical with light hypnosis. It is necessary to take this fact into account in criticism, since criticism of "hypnotic" poetry by intellectualist standards manifestly misses the point.—R. R. Willoughby (Clark).

1594. Spasokutskii, N. N. Deyatel'nost gos. instituta po izucheniyu prestupnosti i prestupnika pri NKPD. (The work of the state institute of the People's Commissariat of the Interior for the study of criminality and the criminal.) *Problemi prestupnosti*, 1929, No. 4, 136-145.—(*Soc. Sci. Abst.* II: 15695).

1595. Sprowls, J. W. Recent social psychology. *Psychol. Bull.*, 1930, 27, 380-393.—A review of 102 titles under the heads: evolution of "pattern" psychology; structural and functional psychology; personality; group psychology; cultural psychology; recent text books. Historical perspectives are suggested.—J. F. Dashiell (North Carolina).

1596. Steffen, A. Ueber das Wesen der Biographie. (On the nature of biography.) *Goetheanum*, 1930, 9, 337-340.—A. Römer (Leipzig).

1597. Stekel, W. Is homosexuality curable? *Psychoanal. Rev.*, 1930, 17, 443-451.—"My experi-

ence during the past few years absolutely confirms my belief that homosexuality is a psychic disease and is curable by psychic treatment." The views of Magnus Hirschfeld and his school are criticized briefly and the mechanisms involved in homosexuality are discussed and illustrated by a case.—*D. Shakow* (Worcester State Hospital).

1598. Surdon, G. *Psychologies marocaines vues à travers le droit*. (The reflection of native psychology in Moroccan law.) *Afrique française*, 1930, 40, 373-380.—(*Soc. Sci. Abst. II*: 16424).

1599. Tiebout, H. M. *Delinquency: problems in the causation of stealing*. *Amer. J. Psychiat.*, 1930, 9, 817-826.—The Adlerian formula is considered as essentially another way of stating Freud's theory of the epinoic gain in explaining motivations in behavior. These Adlerian motivations function chiefly in a rôle secondary to the onset of the delinquent behavior. Another psychoanalytic concept, "paranoic" gain, or "advantage by illness" may also be used in considering the motivation of delinquency. Bibliography.—*S. J. Beck* (Boston Psychopathic Hospital).

1600. Verweyen, J. *Der Typus des gütigen Menschen*. (The type of the good man.) *Zsch. f. Menschenkunde*, 1930, 6, 190-196.—*A. Römer* (Leipzig).

1601. Vidoni, G. *Tra i problemi della delinquenza minorile*. (The problems of juvenile delinquency.) *Rinnovamento med.*, 1930, 9, 3-11.—The fact that, according to a new regulation in the Milan court, a psychologist takes part as an expert witness in every trial of a juvenile delinquent, gives the author an opportunity to bring into his article the main problems of juvenile delinquency. For example, it is pointed out that, as Sante de Sanetis has already shown, the presence of a pathological disturbance (moral imbecility, intellectual deficiency of varying grades, epileptoid states, schizothymic character, pathological constitution) can almost always be demonstrated in child criminals (under 12 years). In very many cases the criminal acts of young persons can be traced back to the love of adventure which is characteristic of this period of life. Often one finds underlying such a "crime" great mental power which under suitable direction could as well express itself in socially useful behavior. The author demands that particularly energetic measures be taken for combating juvenile crime.—*A. Angyal* (Turin).

1602. Villinger, W. *Kriminalbiologie*. (Criminal biology.) *Fortschr. d. Neur. Psychiat. u. Grenzgeb.*, 1930, 2, 489-505.—A review of the more recent literature. Most of the papers reviewed deal with the general problems of method and theory. While criminal biology is in a somewhat chaotic condition at the present time, the reviewer holds that ultimately the criminal will be the subject of the cooperative research of the biologist, the psychologist and the sociologist. A bibliography of 32 titles is given.—*R. H. Waters* (Arkansas).

1603. Vislick-Young, P. *Urbanization as a factor in juvenile delinquency*. *Amer. Sociol. Soc. Papers*, 1930, 24, 162-166.—(*Soc. Sci. Abst. II*: 16922).

1604. Vold, G. B. *Factors entering into the success or failure of Minnesota men on parole*. *Amer. Sociol. Soc. Papers*, 1930, 24, 167-169.—(*Soc. Sci. Abst. II*: 16923).

1605. Waller, W. *The old love and the new; divorce and readjustment*. New York: Liveright, 1930. Pp. xix + 344. \$3.50.—This is a socio-psychological study based on 33 case-studies in which the psychoanalytic technique was used as a means of facilitating understanding of the problems and processes involved (not as a remedial measure). The fact of divorce involves a loss of status on the part of the divorcee, in spite of "enlightened" modern attitudes, and a concomitant personality disintegration as a result of the psychic trauma, both of which bring with them the necessity of profound reorganization and adjustment. The fields in which this must occur are: (1) habits of sex expression, (2) healing one's injured pride, (3) all the various habit systems other than (1) established during conjugal life, (4) social relationships, (5) economic problems, (6) total personality reintegration. The manner in which readjustment will be effected in any particular case is indicated by (1) the reasons for the inevitable delay in obtaining the divorce, (2) the nature of the marriage (dominance-subordination, container-contained) relation, (3) reason for the divorce (adultery, incompatibility, pathological fixations, homosexual trends). Sexual starvation usually begins before the actual separation, as a function of the developing maladjustment. Adultery, rather than a cause of maladjustment, is nearly always but a symbol of the process of alienation produced by other causal factors. Both subjective and objective influences combine to reduce the sexual activity of the divorcee to a low moral plane. In the necessary economic readjustment, the woman faces much greater difficulties than the man. The woman with assets often plunges into the use of them with much determination, the one without may accept positions of doubtful nature or may return to her parental home. The man suffers loss of professional standing, becomes adjudged a moral risk, often finds it difficult to meet demands for alimony. Some conflicts peculiar to the divorcee arise in the process of readjustment. Common repressions are: accumulated hostility toward the divorced mate, identification of self with the stereotype of the divorcee, homosexual trends, self-pity over the fact of divorce. The divorcee must learn to utilize the experience of divorce, must incorporate it into his personality organization. An experience is assimilated when there is (1) acceptance by the ego, (2) dissipation of affect, (3) stable rearrangement of fundamental impulses into the pattern necessitated by the experience, (4) positive utilization of all aspects of past experience.—*G. L. Barclay* (Syracuse).

1606. Werner, H. *Die Rolle der Sprachempfindung im Prozess der Gestaltung ausdrucks-mässiger erlebter Wörter*. (The rôle of speech perception in the process of building words experienced as moderate.) *Zsch. f. Psychol.*, 1930, 117, 230-254.—*A. Römer* (Leipzig).

1607. Woodburne, A. S. The contribution of psychology to anthropology. *Indian J. Psychol.*, 1930, 5, 1-17.—Presidential address in the section of Psychology of the Indian Science Congress, 1930. All superstitions are survivals of beliefs or practices that were created to meet what was at one time a felt need. A country like India is rich in such survivals. It is an interesting psychological problem to search after the original need which fostered these later survivals. Using the genetic method, psychology, aided by anthropology, is interested in the interpretation of primitive culture, primitive magic, primitive mythology, and primitive religion. The student of the folkways is impelled to pry into the reasons why behavior has taken a certain pattern, or why an institution has survived in a particular form. Deep beneath a veil of symbolism that is often baffling and metamorphosed in conflicting stages among widely divergent social levels, the original motive is to be sought. Four highly interesting problems are considered in this paper: (1) primitive thinking; (2) the primitive concept of soul; (3) primitive religion and magic; and (4) primitive kinship, totemism, and ideas of paternity.—*L. A. Averill* (Worcester State Normal School).

[See also abstracts 1312, 1430, 1431, 1436, 1442, 1490, 1503, 1510, 1511, 1646, 1658, 1661, 1662, 1673, 1680, 1733, 1741.]

INDUSTRIAL AND PERSONNEL PROBLEMS

1608. Alderton, C. C. Store and school; factors in the success of department store workers. *Person. J.*, 1930, 9, 314-321.—A positive relation is found between intelligence test grades and success of girls in department store work. Financial promotion is partially dependent on tenure of employment. Selection of employer ranks high in determining wages for the first five years. Girls doing sales work generally earn more money than those in non-sales departments. Success is further dependent on personal qualities.—(Courtesy *Person. J.*).

1609. Allendy, R. La psychologie inconsciente et les aptitudes professionnelles. (The psychology of the unconscious and professional aptitudes.) *Bull. Chambre des Métiers de la Gironde*, 1930, 2, 9-12.—The author thinks that tests, as they are now organized, ought to be used only to find counter-indications, that is, diagnosis of inaptitude. Only a study of psychology and especially of the unconscious as revealed by psychoanalysis should give positive indications of aptitude for a trade.—*Math. H. Piéron* (Sorbonne).

1610. [Anon.] Industrial psychology in Russia. *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 221-222.—This short paper is based on a communication from W. Spielrein. It is primarily concerned with tracing very briefly developments in the use of intelligence testing and vocational selection. The significance to the latter of Pavlov's conditioned reflex work is noted. An account is given of the types of organizations making use of psychological methods, also a brief summary of the achievements of contemporary Russian work.—*M. Drury-Smith* (Cambridge, England).

1611. Beckham, A. S. Minimum intelligence levels for several occupations. *Person. J.*, 1930, 9, 309-313.—Tables are given showing jobs that can be performed by those with mental ages from five to twelve. Beginning with the seventh or eighth mental age level some responsibility can be delegated to employees. Mental ages between 10 and 12 are capable of routine of a high type. Laundry employees rated as excellent have the highest average intelligence. Employees who are classed good, fair, and poor have about the same average intelligence.—(Courtesy *Person. J.*).

1612. Bingham, W. V. Psychology and highway safety. *Scient. Mo.*, 1930, 31, 552-556.—In Europe and America psychologists have been analytically testing out the human factors that make for automobile accidents. Requirement of the driver's license is recommended.—*J. F. Dashiell* (North Carolina).

1613. Blich Holst, H. Chauffører og lægeattester. (Chauffeur and medical certificates.) *Tidsskr. f. d. Norske Lægeforening*, 1930, 50, 1223-1225.—In Norway the physicians are called upon to examine candidates for driver's licenses. Three questions are to be answered: (1) sight, each eye, with and without correcting glasses; (2) hearing, each ear; (3) motility and health. The writer deplores the present absence of clear norms. The Ophthalmological Society of Norway has proposed the following minimum standards for sight and hearing: A private automobile driver may be one-eyed provided the blindness of the other eye has lasted for one year. Acuity of vision for both private and professional drivers must be at least 5/10 for both eyes (with or without correcting glasses). Professional drivers may have 5/15 on one eye if the other has at least 5/6, and must have normal sense of color. All drivers must be reexamined every fifth year.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1614. Brandt, K. Observations des anomalies mentales au cours de l'examen psychotechnique. (Observations of mental anomalies in the course of a mental examination.) *Psychol. Rundschau*, 1930, 2, 211-215.—Brandt emphasizes the desirability of bringing to our help in the practice of psychotechnics the physician's judgment. The psychologist may easily interpret all indications in the light of his science, and thus overlook true causes and reach fallacious conclusions. The notion of normal and abnormal is merely relative. Abnormality in a certain field may be accompanied by normality in another. There are social and temperamental characteristics. The medical notion of mental deviation is a sort of compromise between all the values. The doctor is more tolerant, since he considers pathology.—*A. B. Herrig* (Michigan Central State Teachers College).

1615. Bruker, E. Psychotechnische Untersuchungen zur Bandarbeit. (Psychotechnical experiments with work on conveyors.) *Zsch. f. angew. Psychol.*, 1930, 37, 275-321.—The psychological advantages of conveyor work lie in the visibility of the manufacturing processes, the tangible evidences of accomplishment, the formation of interdependent groups, and the necessary rhythmic action. The author raises the question: What is the influence of

the speed of conveyor on performance? 30 factory girls were tested in the laboratory with sorting and assembling operations. The sorting test involved the separation of six different kinds of nuts with the belt moving continuously at different rates or moving in stop-go fashion. The assembling tests made use of simple radio and Meccano parts, but in addition to the speed variation compared the efficiency of paired workers when arranged on the same or opposite sides of the conveyor. Comparisons were made solely in terms of errors or incomplete assemblies. The major conclusions are: stop-and-go operation of the belt is more efficient in joint terms of production and agreeable work; right-handed workers perform best when the direction of motion is from left to right; it is a matter of indifference whether the workers follow the belt or remain stationary; temperamental differences make the optimal speed of continuous movement (within certain limits) a matter of individual preference.—G. W. Hartmann (Berlin).

1616. Carrard, A. *Einleitung. (Konferenz der Psychotechniker der Schweiz. Stiftung für Psychotechnik in Magglingen, 28-30 August 1930.)* (Introduction. Conference of the psychotechnologists of the Swiss Society for Psychotechnics in Magglingen, August 28-30, 1930.) *Psychol. Rundschau*, 1930, 2, 193-196.—The introductory article in a series reporting this conference. Last year was concerned with testing technics. This year the place of systematic observation during psychological testing received consideration. Emphasis is placed on the folly of testing merely to find relationship to a norm, losing the personality itself in this procedure. It is anticipated that ever larger interest will be shown in development of measures for observation during testing. For this purpose empathy as a characteristic of the tester is essential. Only personality can sense personality, but this observation needs the help of objective measurement. The discussion deals with relationship of short-period testing and longer-term observation and sees the values of both.—A. B. Herrig (Michigan Central State Teachers College).

1617. Christiaens, A. G. Vocational guidance and selection in Belgium. *Person. J.*, 1930, 9, 322-326.—R. R. Willoughby (Clark).

1618. Crawford, A. B., & Wigmore, J. H. Legal aptitude tests. *Illinois Law Rev.*, 1930, 24, 801-806.—(*Soc. Sci. Abst.* II: 15678).

1619. Crawley, S. L. *A syllabus for the first course in experimental psychology.* New York: Holt, 1930. Pp. 177. \$1.20.—The first chapter is devoted to a discussion of general procedure in psychological experimentation, and includes a short treatment of the use of the simpler statistical concepts. Assignments are given of twenty-four experiments commonly found in elementary courses in experimental psychology. Problems in these assignments cover the following fields: individual differences, range and accuracy in observation and report, suggestion, reliability of verbal reports, audition, vision, cutaneous, sensory adaptation, human urges and motivation, feelings, attention, intelligence, learning, association, memory, perception, mental imagery, mental diagnosis, and personality.

A bibliography is included, with references classified according to the above fields. In each assignment the student is given a specific problem. The method to be used presumably is to be developed by the student or the instructor. Suggestions are made as to procedure which may be followed in each problem.—B. Casper (Clark).

1620. Crowden, G. P. *Industrial efficiency and fatigue.* *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 193-201.—It is claimed that industrial efficiency is as much the concern of physiology, preventive medicine and psychology as of engineering or business management. The factors which influence working capacity or efficiency are then briefly outlined. Special reference is made to the question of nutrition or standard of living, and the experience of Germany with bread rationing during the war is cited. Other relevant factors considered include ventilation, temperature and lighting, health, housing and habits, and length of the working day. Brief mention is made of the steps taken in this and other countries to regulate these conditions. The writer also describes his impressions of the working in Germany of a new and improved system for training apprentices for industry, the "Dinta" system.—M. Drury-Smith (Cambridge, England).

1621. Outler, T. H. *The effectiveness of page size in magazine advertising.* *J. Appl. Psychol.*, 1930, 14, 465-469.—Using recall and recognition tests on 393 subjects, the author found that a full page advertisement in a magazine of large page area has little or no advantage over the same advertisement published full page in a magazine of smaller page area.—G. L. Barclay (Syracuse).

1622. Dugas, L. *La conception positiviste de la technique.* (The positivistic conception of technique.) *Psychol. et vie*, 1930, 4, 183-185.—Math. H. Piéron (Sorbonne).

1623. Ferrari, O. A. *Aspetti moderni dell' organizzazione del lavoro con particolare riferimento al fattore umano.* (The modern aspects of the organization of work with reference to the human factor.) Rome: Enios, 1929. Pp. 158.—After sketching the general status of the science of work (rationalization and scientific organization of work), the author discusses the scientific methods of evaluating men, time studies (with comments on his own technique), movement studies, and the psycho-reflex of work on the worker.—M. Ponzo (Turin).

1624. Gemelli, A. *I problemi attuali dello psicotecnica nell' industria nazionale.* (Current problems of psychotechnics in national industry.) *Riv. int. sci. soc.*, 1930, 28, 3-37.—After sketching what has been done in Italy in the field of psychotechnics, and after outlining the Italian tradition in the psychotechnics of work, the author analyzes the possibilities of an Italian development in this field. In Italy psychotechnics is particularly in harmony with the special needs of industry and should be applied particularly to the study of the division of labor, to the regulation of personnel, and to the increase of production by means of individual awards which will place emphasis upon individual merit. The direc-

tion of research should not be left to private initiative. A state organization for the study of work is suggested, to be divided into the following sections: physiology of work, psychotechnology, work diseases, and accidents.—*M. Ponzo* (Turin).

1625. Gruyer, M. *La technique. Rapport de la pensée à l'action.* (Technique. The relation of thought to action.) *Psychol. et vie*, 1930, 4, 185-188.—*Math. H. Piéron* (Sorbonne).

1626. Hall, O. M. The disagreeable job; selecting workers who will not be annoyed. *Person. J.*, 1930, 9, 297-304.—The question of disagreeable jobs is analyzed and discussed. Some concerns have a high and costly labor turnover because of the peculiarly annoying or disagreeable character of the work. It is not greatly annoying to some, but others are too disturbed to remain long. This paper describes a technique for detecting before employment those applicants who will not be bothered by the disagreeable features of the work. It selects such a feature and finds by statistical means eight other conditions that are highly correlated with it. That is, those who are not annoyed by the first condition also tend to be unannoyed by the eight others, and conversely, those who are greatly annoyed by the first are greatly annoyed by the others. With this point established, applicants can be examined to find out how much they are annoyed by these other conditions. From this a prediction is made as to how much they will be annoyed by the job. Other things being equal, those found to be unannoyed by the job, so disagreeable to other people, will be selected as the safer risks.—(Courtesy *Person. J.*).

1627. Hersey, R. B. A monotonous job in an emotional crisis. *Person. J.*, 1930, 9, 290-296.—Factors determining the mental attitude of any person toward his life and work are often difficult to trace. This article, nevertheless, attempts to portray, through the intensive study of an individual worker, how the nature of a man's job and his cyclical variations in mood color to a large extent his attitude toward a serious problem of readjustment. The case portrayed, though not a usual one, brings into high relief the bearing emotional processes and the nature of the job may have in the life of a worker. The study of an extreme case such as this helps in understanding those emotional reactions which less obviously but just as truly characterize the relations of normal men to their work.—(Courtesy *Person. J.*).

1628. King, A. E. Road repairs. *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 214-220.—An article written from the viewpoint of "the man in the street," to whom it has appeared curious that no scientific investigation has been undertaken to discover means of enabling road repairs to be speeded up. The author gives an analysis of the eight main operations involved in road repairing and suggests methods by means of which an increase in speed could be attained in the most important of these. Three intimately connected processes, excavation, removal of debris, and bringing up the aggregate, present special difficulties and are discussed in more detail. A method of accelerating drilling—the slowest of all repair operations—is described. In conclusion, the

paper claims that an increase in the speed of road repairs would benefit all sections of the community.—*M. Drury-Smith* (Cambridge, England).

1629. Lorigo, G. *Lo razionalizzazione del lavoro e lo fatica.* (The rationalization of work and fatigue.) *Rass. di med. appl. lavoro indus.*, 1930, 1, 195-198.—The rationalization of work will never be completely accomplished unless sufficient account is taken of the relevant contributions made by physiology, pathology, and hygiene. The author, after establishing certain premises concerning the effects and signs of fatigue, derives certain corollaries which concern the human organization of work, the elimination of useless fatigue, and the reduction of effort. He maintains that an excessive importance has been assigned to studies of movement in comparison with studies of the correct postures for work. The topics which are most urgently in need of study are indicated.—*M. Ponzo* (Turin).

1630. Macrae, A., & Milner, M. Interest and ability. *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 144-153.—This paper consists of two parts. The first part is concerned with stressing the fact that though a child may have a "leaning" towards a particular occupation, and though this should not be disregarded, it is not safe to consider a "leaning" as an adequate index of suitability. The child's reasons for choosing an occupation may be based on a very slight knowledge both of its requirements and of his abilities and needs, emotional, instinctive and intellectual. The second part consists of an interesting discussion of some of the most fundamental aspects of vocational guidance work. It gives an analysis of the working and effects, in and upon both the individual and his task, of such subtle elements as effort, capacity and morale, and in consequence, shows very vividly that there is far more demanded of true vocational guidance than the mere fitting of an ability to the requirements of an occupation.—*M. Drury-Smith* (Cambridge, England).

1631. Manning, W. H. O'N. Industrial psychology and production planning. *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 203-213.—Now that the value of the standpoint and methods of industrial psychology has been realized, the attention of industrial psychologists is being directed more and more to the larger and more fundamental aspects of production organization, such as questions of layout and routing, of transport and storage, and of forecasting and controlling the flow of work, i.e., to problems of planning. There follows an examination of the general bearing of psychology on the practical study of factory conditions, psychological knowledge being regarded as a weapon of diagnosis. The salient points in production planning are then outlined, and the psychological consequences of deficient planning emphasized. The function of planning consists in the regulation and coordination of the three main factors involved in any organized work, viz., men, materials and machines, "so as to ensure that the required production flows through them with a maximum of ease and speed and with a minimum of interruption delay and congestion and of human and material waste." The paper concludes with a brief

summary of some of the Institute's most recent investigations along these lines.—*M. Drury-Smith* (Cambridge, England).

1632. Miles, G. H. *The psychology of accidents.* *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 183-192.—The writer is concerned because although investigations into the physical causes of accidents show no lack of thoroughness, there is still so immense a scope for improvement in the human side of the enquiry, towards which aspect at the moment there exists "almost criminal indifference." He feels that in the interests of public safety it should be essential to determine scientifically such a vital question as who is fit to drive a vehicle, and who by reason of some hidden mental or physical defect never will be fit. An outline is given of the advances made in recent years in England, U. S. A., and Germany, in determining the causes and measuring the degree of an individual's accident proneness. The types of tests used in some cases are described, and one or two subsidiary points arising out of such enquiries, e.g., the relation between accident proneness and general efficiency, are indicated.—*M. Drury-Smith* (Cambridge, England).

1633. Muggia, A. *L'esame biotipologico dei militi del salvataggio del mare.* (Biotypological examinations of the employees of marine salvage.) *Rass. di med. appl. lavoro indus.*, 1930, 1, 221-225.—For the qualification of the employees of the marine salvage the author has made a preliminary selection from the results of examinations of the physical constitution of the candidates with particular reference to the muscular capacity for fatigue resistance, respiratory capacity, and cardio-vascular capacity. The mental capacities selected are based upon the determination of the reaction time to light and sound, the rhythmic capacity for composite movements, and the perfection of various movement times.—*M. Ponzo* (Turin).

1634. Munro, M. S., & Raphael, W. *Selection tests for clerical occupations.* *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 127-137.—An account of an investigation carried out among the clerical workers in the office of a chemical company. The work included the devising of a scheme for establishing a central staff office to deal with such problems as selection, promotion and transfer; it also involved the standardization of psychological selection tests for ten clerical occupations. The tests, and results obtained with them for four of the posts, are described in some detail.—*M. Drury-Smith* (Cambridge, England).

1635. Richards, J. R. *Interviewing industrial employees.* *Person. J.*, 1930, 9, 281-289.—This paper tabulates and evaluates the findings of five interviewers from the Pennsylvania State College who interviewed 243 employees of a Pennsylvania manufacturing company on their attitudes toward the policies of the management. The project marks the entrance of an outside agency into the plants of a private industrial company. The article deals with the operation and value of the interview method when functioning with the confidence of the interviewees. Likes and dislikes expressed by workers and specific

suggestions contributed by them are tabulated, and the reliability of the data is considered. The paper attempts to show the requirements of an interview study in an industrial plant, the results obtained, and the use of such interviews in diagnosing local plant conditions and worker attitudes. The material gathered is to be used in foreman training courses.—(Courtesy *Person. J.*).

1636. Sadler, W. S. *The business woman; her personality and health.* (3d ed.) Chicago: Rockwell, 1930. Pp. 128. \$1.25.—*R. R. Willoughby* (Clark).

1637. Scarborough, C. *The (British) National Institute of Industrial Psychology.* *Person. J.*, 1930, 9, 327-331.—This paper deals with the formation and purpose of the National Institute of Industrial Psychology, and outlines the work it is doing in its factory investigations, in its personnel studies, in vocational guidance, and in research and education. It discusses the importance of psychology's contribution to industry, and the relation of the psychologist to the production engineer and to management research.—(Courtesy *Person. J.*).

1638. See, H. *Science et technique.* (Science and technique.) *Psychol. et vie*, 1930, 4, 181-183.—Science dominates technique, from which it has not arisen, but it draws the greatest profit from the problems which more and more are raised by psychotechnology.—*Math. H. Piéron* (Sorbonne).

1639. Vernon, H. M. *Methods of investigating the heating and ventilation of factories.* *J. Nat. Instit. Indus. Psychol.*, 1930, 5, 139-143.—This report of a lecture to the Institute is intended to supplement an article by M. F. Peterson which appeared in one of the 1927 volumes of this Journal. It is based on ten years' practical experience in factories and similar buildings where the methods and apparatus described have been thoroughly tested. Different types of ventilation systems are briefly described and their relative values assessed, particular reference being made to temperature-gradient and cooling power. Graphs are given, together with a table which shows the desirable standards of temperature, air movements and cooling power which should exist in relation to a representative series of outdoor temperatures.—*M. Drury-Smith* (Cambridge, England).

1640. Vernon, H. M. *The measurement of radiant heat in relation to human comfort.* *J. Physiol.*, 1930, 70, *Proc. Physiol. Soc.* xv-xvii.—A globe thermometer, consisting of a thermometer surrounded by a hollow pasteboard sphere, may be used to determine the radiation conditions necessary for comfort. Some measurements are given.—*G. C. Grindley* (Cambridge, England).

1641. Vidoni, G. *La sensibilità indice di educabilità nelle valutazioni psicotechniche.* (Sensitivity as an index of educability in psychotechnical evaluations.) *Riv. psicol.*, 1930, 24, 105-108.—*T. M. Abel* (Sarah Lawrence).

1642. Viteles, M. S. *Psychology in industry.* *Psychol. Bull.*, 1930, 27, 567-635.—An exhaustive and

discriminating review lists 480 titles under the following heads: (1) scope; (2) vocational selection: general, measurement of motor capacity in industry, specific occupational tests for skilled and semi-skilled, for office occupations, for transportation employees, for professions, etc., trade tests, non-test factors, occupational qualifications; (3) applications to merchandising; (4) other industrial applications: accidents, training, monotony, motivation, maladjustment, fatigue, and management.—*J. F. Dashiell* (North Carolina).

1643. Wallon, H. *Principes de psychologie appliquée*. (The principles of applied psychology.) Paris: Colin, 1930. Pp. 225. 10 fr. 50.—Eschewing a division of applied psychology according to the different fields of experience from which it has arisen (the school, trade, law, etc.), the author prefers to study the different instances to which these activities might correspond. He investigates first an act in prospect: if it is of a general nature, the psychology of work will be concerned, while if it is of a special nature, an examination by means of tests may be interposed. When the act has been completed, there can be a study made in retrospect of the actions and their influence on the subject. The author divides his work into four parts: the psychology of work (the physiological conditions, psychological effects, curves, effort factors, and rendition); aptitudes and the test method (the principles and origin of the method, development and aptitude tests, their numerical evaluation and their application); professional activity (rationalization, professional selection and orientation, and methods and results); and the motives and psychological consequences of activity and their utilization (the claim, the facts, and the evidence). There is a short bibliography.—*Math. H. Piéron* (Sorbonne).

[See also abstracts 1301, 1302, 1314, 1316, 1324, 1331, 1440, 1497, 1529, 1691, 1713.]

CHILDHOOD AND ADOLESCENCE

1644. Arlitt, A. H. *The child from one to six*. New York: McGraw-Hill, 1930. Pp. xix+185. \$2.00.—A very practical treatment of child behavior designed especially for parents, with numerous concrete examples of behavior and specific suggestions for the parental guidance of the child. Throughout the author uses short paragraphs and simple phraseology. A list of the chapter headings will indicate the practical approach: willing obedience, discipline, punishment and rewards, good and bad habits, habits of sleep, rest, and elimination, eating habits, temper tantrums and quarreling, children's fears, training in emotional control, your child's imagination, how your child thinks, toys, games, and occupations for the pre-school child (containing a list of toys and the ages at which they are used), the use of money.—*E. B. Heim* (Provo, Utah).

1645. Bühler, C. *Kindheit und Jugend*. (Childhood and youth.) *Psychol. Monog.*, 1928, 3. Pp. 304.—(*Soc. Sci. Abst.* II: 16730).

1646. Dudycha, G. J. *The social beliefs of college freshmen*. *School & Soc.*, 1930, 32, 846-849.—

About 100 college freshmen were asked to express their belief or disbelief in 25 propositions regarding social and political problems and concepts. They seemed "to place a high value upon the home, marriage, and church as institutions necessary for the structure of society and to recognize the rights and privileges of others. On the other hand, they expressed little faith in companionate marriage, socialism, equal distribution of wealth, or radicalism, as it is commonly understood."—*H. L. Koch* (Chicago).

1647. Ferrari, G. C. *Gli adolescenti e l'igiene mentale*. (Adolescents and mental hygiene.) *Riv. psicol.*, 1930, 24, 149-156.—*T. M. Abel* (Sarah Lawrence).

1648. Glueck, B. *Psychoanalysis and child guidance*. *Ment. Hygiene*, 1930, 14, 813-827.—The author criticizes the opportunism that governs most child guidance today. It is questionable how much the solution of the immediate behavior problems of the child contributes toward the prevention of adult maladjustment, neuroticism, and failure. Adult and childhood maladjustments are essentially alike. In both fields the libido theory is a workable and indispensable hypothesis. If any form of psychotherapy personal participation of the patient is necessary. Finger sucking shows that an element of participation is present in the first months of life. Internal conflict between instinct and culture is present from the first. Normality is the achievement of a compromise between the two.—*E. M. Ligon* (Union).

1649. Gross, J. *Anssagepsychologische Untersuchungen an Kindern*. (Studies in the psychology of testimony in children.) *Zsch. f. angew. Psychol.*, 1930, 37, 438-459.—Children between the ages 5-11, belonging respectively to the "integrated" and "non-integrated" eidetic structure, were shown a simple picture for two minutes and required to answer 20 questions concerning it immediately after exposure and also one week later. The extent and fidelity reports of the "integrated" group were uniformly superior to those of the "non-integrated," regardless of whether questions of a general, color, or suggestive character were involved. Girls generally excelled boys, save that they were more influenced by suggestive questions.—*G. W. Hartmann* (Berlin).

1650. Haggerty, M. E., Olson, W. C., & Wickman, E. K. *Haggerty-Olson-Wickman behavior rating schedules*. Yonkers-on-Hudson: World Book, 1930. Pp. 6. \$1.00 (pkg. of 25).—Designed for study of behavior problems and problem tendencies of children. Manual of directions, class record, and report to authors included.—*D. Shakow* (Worcester State Hospital).

1651. Hanselmann, —. *The problem child*. *Rev. int. de l'enfant*, 1930, 9, No. 27.—(*Soc. Sci. Abst.* II: 16737).

1652. Heinis, —. *L'observation chez l'adolescent*. (Observation of the adolescent.) *Psychol. Rundschau*, 1930, 2, 208-211.—Binet describes human beings as going through three stages (infancy, adolescence, adulthood) comparable with the three successive stages of development of the insect (larva,

nymph, adult). As the larva does not resemble the adult, so the child is not the adult and needs to be understood in order to be educated. The period of greatest growth is puberty, beginning with girls at the age of twelve, with boys at fourteen approximately, and lasting two years. The author emphasizes the great need of better understanding of the age, and reaches the conclusion that we probably need experts, at least high specialization in the field of study of the adolescent type, for better understanding and for better methods of approach in educative procedure.—*A. B. Herrig* (Michigan Central State Teachers College).

1653. Hightower, P. R. Biblical information in relation to character and conduct. *Univ. Iowa Stud.: Stud. Char.*, 1930, 3, No. 2. Pp. 72.—Tests of Biblical information were prepared and given to about 4,000 children in the seventh to twelfth grades. Measures of conduct included a number of tests of cheating and lying, class loyalty, altruism or unselfishness, and teachers' ratings on various conduct traits. No relationship was found between Biblical information and the different phases of conduct studied. The results indicate that knowledge is not of itself sufficient to insure proper character growth.—*B. Wellman* (Iowa).

1654. Hill, J. C., & Robinson, B. A case of retarded mental development associated with restricted movements in infancy. *Brit. J. Med. Psychol.*, 1930, 10, 268-277.—A child had had his hands tied after a circumcision at the age of two weeks to prevent touching the injured parts, and in subsequent illness his hands and feet were tied to prevent scratching. The constraint by tying continued every night until he was six years old. His intelligence was then that of a normal two-year-old. Improvement was made after freedom was granted, and the child learned to manipulate and explore his environment.—*E. R. Hilgard* (Yale).

1655. Hillyer, V. M. Child training. New York: Century, 1930. Pp. xiv + 299. \$2.00.—A handbook of daily lessons, exercises, and drills especially for the parent. In each part (story telling, physical training, free play, rhythmic arts, etc.) a number of specific suggestions or lessons are given.—*E. B. Heim* (Provo, Utah).

1656. Hollingworth, L. S., & Gray, H. A. Juvenile achievement as related to size. *Teach. Coll. Rec.*, 1930, 32, 236-244.—"The present study was undertaken . . . to hold age and ability [Stanford-Binet] constant at different degrees of size, letting achievement [Stanford Achievement] vary as it might." 50 children (45 Jewish) of IQ 135 or over, 8-12 years old, who had been together 2 years or more were studied. "There is no relation between size and A. R., among these gifted competitors. No 'compensatory' influence of small size as a physical inferiority is demonstrated by these quantitative data."—*J. M. Stalnaker* (Purdue).

1657. Lembke, W. Über Zeichnungen von "frechen" und "schuchternen" Schulkindern. (The significance of drawings by "bold" and "shy" pupils.) *Zsch. f. päd. Psychol.*, 1930 (October),

459-463.—The drawings were made by pupils characterized by their teachers as "bold" or "shy," seventeen of each group being selected by pairs from 17 classes of the 2d and 3d grades of the Hamburg *Volksschulen*. There were 16 pairs of boys, one of girls. The "shy" use combinations of complementary colors, and prefer the brightest colors, especially as main colors for major fields; the general effect is bright or light; objects are sharply delineated; the blend of violet-brown is rarely employed for major fields. In the case of the "bold" combinations of non-complementary colors predominate; colors for major surfaces are darker; objects have indistinct outlines; the general impression in the majority of cases is dark or dull; blends of violet-brown are much more frequently used.—*J. C. Spence* (Clark).

1658. Lockhart, E. G. The attitudes of children towards law. *Univ. Iowa Stud.: Stud. Char.*, 1930, 3, No. 1. Pp. 61.—A test of attitude towards law was devised and given to more than 3,000 children from grades four to twelve inclusive, fifty selected lawyers, fifty graduate students and a civics club. Children were found not to differ greatly from adults in their attitude towards law. Children from different socioeconomic conditions, as measured by the Sims scale, did not differ in their attitudes towards law. Intelligence was found to be a factor in determining attitude provided the mental age was as low as eight years, or less. As mental age increased the degree of intelligence appeared to exert less influence. Children of high school age who ranked in the highest level of intelligence tended to draw away from the attitude held by adults.—*B. Wellman* (Iowa).

1659. Lundeen, G. E., & Caldwell, O. W. A study of unfounded beliefs among high-school seniors. *J. Educ. Res.*, 1930, 22, 257-273.—A study by the questionnaire method of 1030 high-school seniors in ten high schools, of which six were in rural and four in urban communities. In all 200 ideas were tested, compiled from published studies on superstitions and unfounded beliefs. Education tends to decrease but not to eliminate such beliefs. "Senior high-school students on the average have heard of approximately one-half of the total number of ideas in this study. On an average they believe in, and are influenced by, approximately one-fifth of the ideas that they have heard." On the other hand, college students have heard of more and believe in less of these beliefs than high-school students. In both groups the women have heard of, believe in and are influenced by more such beliefs than the men. The study has differentiated a relatively small list of unfounded beliefs (about 30) which are commonly held by students.—*S. W. Fernberger* (Pennsylvania).

1660. Muggia, A. Lo collera nel lattante. (Anger in infants.) *Riv. di clin.*, 1930, 5, 1-5.—The author mentions several forms of anger appearing in the first years of life and explains them very briefly by normal organic and pathological factors. Possible prophylactic and therapeutic factors are discussed.—*M. Ponzo* (Turin).

1661. Pennacchi, P. Cinemo e adolescenza con speciale rapporto alle malattie nervose e mentali. (Moving pictures and adolescence with particular

reference to nervous and mental diseases.) *Riv. int. cinema educ.*, 1930, 2, 1084-1113.—After commenting upon the enormous diffusion of the cinema throughout the world, the author presents a different order of causes which explains the particular frequency of adolescents in the cinemas. Note is made of the great influence which the cinema has on the young, and the author insists upon the damage which the nervous system may undergo during these formative years. A few of many clinical cases are cited where the causation (acting upon hereditary or acquired morbid predispositions) can be traced to the cinema.—*M. Ponzo* (Turin).

1662. Plant, J. S. Some psychiatric aspects of crowded living conditions. *Amer. J. Psychiat.*, 1930, 9, 849-860.—The following traits have been commonly found among children in large families in crowded quarters who have come to the attention of the Essex County Juvenile Clinic: (1) difficulty in developing a self-sufficient personality; (2) destruction of illusions concerning others, and therefore difficulty in building personal idealism; (3) destruction of illusions concerning sex with consequent valuation of sexual life *per se*; (4) "mental strain" incident to the need to get along with others; (5) failure to develop the habit of objectifying the self. These traits are "reasonably to be ascribed to crowding."—*S. J. Beck* (Boston Psychopathic Hospital).

1663. Beckless, W. C. Case studies built around observations of individual foster-children in the playground of a receiving home. *Amer. Sociol. Soc. Papers*, 1930, 24, 170-173.—(*Soc. Sci. Abst.* II: 15694).

1664. Robin, G. L'onanisme chez l'enfant. (Onanism in children.) *Evolution psychiat.*, 1929, Ser. II, 87-120.—*Math. H. Piéron* (Sorbonne).

1665. Robin, G. L'enfant sans défauts. (The child without faults.) Paris: Flammarion, 1930. Pp. 290. 12 fr.—The author thinks that what we call a fault in the child is in the main that which we do not understand in him. It is that which is different in the reactions of the child from those of the individuals in his environment. The author thinks that the child's mistakes are caused by the ignorance, despotism, or meanness of adults. In brief, the child has no real defects, but is either badly reared or is ill. Robin reviews the principal faults: fear, anger, nervousness, disobedience, gluttony, curiosity, jealousy, lying, thieving, cruelty, and laziness in the child. There is no bibliography.—*Math. H. Piéron* (Sorbonne).

1666. Roth, T. Backfälle über ihre Konflikte mit ihren Eltern und über ihr Jugendideal. (The adolescent girl and her conflict with her elders and her youthful ideals.) *Dtsch. Mädchenbildung*, 1930, 6, 416-419.—*A. Römer* (Leipzig).

1667. Sergi, G. Psiche, genesi-evoluzionale. (Psyche, genetic development.) Turin: Bocca, 1930. Pp. 218. Lire 18.—The author reports on the experiences which he had in observing the development of a child from birth to the close of the second year. His notations relate to the progressive

control of movements, and the development of sensibility, emotion, recognition, will, the ego and speech. The second and disproportionately longer part of the book is concerned with the interpretation of the collected observations. The author refers to the psychological views which he has represented for many years and which he sees confirmed anew in the observations reported; thus the book can at the same time be looked upon as a short recapitulation of the author's psychological work. His main position can be summed up in the statement that the mind is a biological function-complex which, like all vital functions, can be reduced to reflexes. In regard to feeling, the author inclines toward the James-Lange theory. Feelings, according to his point of view, are peripheral phenomena, organic changes, and the brain merely has the rôle of making these changes conscious. Volitional behavior is explained as a reflex act in which the movement does not follow immediately upon the stimulation, but only after an interruption; during this interruption the movement in question is foreseen and determined. In the beginning the child, according to the author, has no clear perceptions. Sensory impressions in the beginning are not referred to external objects, but are experienced as subjective states. The author conceives the localization of the objects of perception as if the brain were a complicated projection apparatus which projects the impression received from the peripheral organs on a centrifugal path to these peripheral organs and from them to external space. Memory, attention, etc., are likewise interpreted on the basis of biological reflex theory. The last paragraphs treat the problem of inheritance. The book closes with a polemic against idealistic philosophy.—*A. Angyal* (Turin).

1668. Spranger, E., Salkowski, —, Fassbender, —, Koch, —, Gaede, —, Schaper, —, Vogt, —, Pfug, —, & Zimmermann, —. Das Problem der Reifeprüfung. (The problem of maturity tests.) *Monatssch. f. höhere Schule*, 1930, 29, 713-798.—*A. Römer* (Leipzig).

1669. Stern, W. Psychology of early childhood up to the sixth year of age. (Trans. by A. Barwell. 6th ed.) New York: Holt, 1930. Pp. 612. \$5.00.—(See III: 1315 for abstract of 5th ed.) As the study of the child's psychic life is the center of all scientific investigations of the entire immature human being, the author aims to contribute to this study by dealing with the normal psychic development of the child of pre-school age. A short résumé of the work done by child psychologists deals with the main trend of development and what the writer terms two remarkable offshoots, viz., psychoanalysis and the Montessori movement, to the merces of which the emotional or impulsive side of the child's life has been almost entirely left. The discussion includes the development of speech, learning, and play. Personality is the root idea, and many illustrations are drawn from the observations and experimentations of parents. This edition differs from former editions mainly in its discussion and criticism of differing psychological theories and in the attention given to the topics of enjoyment and creative activity, and to

effort, emotion and will. Two contributions appear as supplements; one by Kurt Lewin on expression-movements in children, accompanied by pictures from photographs, supplies a long felt need of the author. The other is a brief article on magic in early childhood, by Henry Werner.—E. V. Brill (Malone, N. Y.).

1670. Struve, K. *Typische Ablaufsformen des Deutens bei 14- bis 15-jährigen Schulkindern.* (Typical varieties of imaginative interpretation in adolescent school children.) *Zsch. f. angew. Psychol.*, 1930, 37, 204-274.—Subjects of this experiment were 117 15-year-old boys and 106 14-year-old girls. Three tests were involved: (1) a modification of the Rorschach method, using cloudlike spots with three degrees of grayness and random distribution of highlights; (2) an interrupted story which the subjects completed in individual fashion; (3) the formation of a tale out of two stimulus words. Analysis of the sketches and narratives resulted in distinguishing five groups: (1) the "counting" type, with a mere tabulation of items; (2) the "explaining" type, in which significance gradually appears by making connections among items; (3) the "intuitive" type resemble eidetics in that complex total actions appear spontaneously; (4) the "inventive" type, in which a new production arises by piecing together successively perceived details either in (a) phantastic or (b) rational style. In 84% of the cases, the subject was constant in his imaginative type; the correspondence between independent ratings and instructors' psychograms was even closer. Girls dominate in types 1 and 2 and tend to offer domestic, personal, and wardrobe details; boys lead classes 3 and 4 and generally present animated combats between humans and animals. Author believes Rorschach's technique to be of service where qualitative measures of intelligence and characterological data are required.—G. W. Hartmann (Berlin).

1671. Themel, K. *Dorfkind, Stadtkind und Industriekind.* (The village child, the city child, and the child in industry.) *Dtsch. Blät. f. erz. Unterricht*, 1930, 57, 345-350.—A. Römer (Leipzig).

1672. Vajkai, J. E. *Enfants chefs.* (Child leaders.) *Pour l'ère nouvelle*, 1930, 9, 144-146.—A psychological study of the characteristics of children who have served as leaders in an experimental school for the education of future workers. In this school groups of children elect their leaders, who are responsible for the order and work of the entire group.—Math. H. Piéron (Sorbonne).

1673. Valentine, C. W. *The psychology of imitation with special reference to early childhood.* *Brit. J. Psychol.*, 1930, 21, 105-132.—An account of an examination, by means of experiments on the writer's own children, of the beginnings of imitation during infancy. It was found that actions to which there is already an innate tendency, e.g., sound-making and smiling, are imitated very readily within the first few months. Actions which serve no purpose perceived by the child and which are not based on instinctive impulses, e.g., winking or "smoking," are imitated freely between the ages of nine and twelve months. Occasionally there is a

"latent" period between the seeing of an action and the imitation of it, and sometimes it is necessary to repeat an action before it is imitated. He concludes that primary, involuntary, or purposeless imitation is probably due to the monopolization of attention for a moment by some fascinating impression. The purpose of some imitations, e.g., those of actions seen in a picture, would seem to be that of helping the subject to realize or share the experience of the imitator more vividly. Other imitations like tongue-protrusion may be regarded as being of a reflex type, if one can apply that term to cases where sight supplies the only stimulus. The relevance of these conclusions to the experimental findings of other workers, like Thorndike, Watson, McDougall and Köhler, is discussed, and an elucidation is given of the respects in which they are in disagreement with the statement of Koffka that animals and children imitate only "what they understand."—M. Drury-Smith (Cambridge, England).

1674. Veleminsky, K. *Russische Jugend.* (Russian youth.) *Werdende Zeitalter*, 1930, 9, 473-476.—A. Römer (Leipzig).

1675. Whitely, R. L. *The observation of the problem boy.* *J. Educ. Sociol.*, 1930, 3, 326-340.—(*Soc. Sci. Abst.* II: 15640).

1676. Williams, F. E. *The importance of social relationships in the development of the personality and character of the adolescent.* *Ment. Hygiene*, 1930, 14, 901-906.—The writer asserts that the life of an individual is lived within himself. Things outside him, good or bad, are significant only when they satisfy certain needs in the individual. It is useless to treat evil by paying attention to evil things. We need to discover the methods by which the growing individual will develop those needs the expression of which is socially desirable.—E. M. Ligon (Union).

[See also abstracts 1312, 1346, 1371, 1418, 1445, 1450, 1457, 1458, 1501, 1546, 1601, 1680, 1741.]

EDUCATIONAL PSYCHOLOGY

1677. Alphonse, J., & Bovet, P. *L'échelle canadienne de composition française.* (The Canadian scale of French composition.) *Arch. de psychol.*, 1930, 22, 298-305.—Is the scale constructed by M. R. Trabue and published by the Canadian Committee on Modern Languages better than the scale which teachers ordinarily employ? In order to arrive at an opinion on this question the authors have collected 32 French compositions of 8-16-year-old pupils who belong to different countries and who have studied French for very unequal periods of time. The compositions were classified by four judges by means of the ordinary scale to which they were accustomed (0-6, with half unit intervals) and by means of the Canadian scale. The mean of the coefficients of variability of the judgments of the 4 judges was 0.078 for the Canadian scale and 0.085 for the customary scale. The Canadian scale seems the better of the two. The authors recommend its use at various times as an objective indication of the progress accomplished. The authors reproduce the

standard of the Canadian scale, which includes 17 grades.—*M. R. Lambergier* (Geneva).

1678. Amans, Mme. L. P. *La synthèse de l'effort humain*. (The synthesis of human effort.) *Pour l'ère nouvelle*, 1930, 9, 141-144.—The author desires an identical education for all the children of the world in accord with the history of human effort, and she gives a plan for practical application for the period of childhood from 3½ to 7 years.—*Math. H. Piéron* (Sorbonne).

1679. Berry, C. A. The aims and methods of education as applied to mental defectives. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 68-72.—"Special education of mentally defective children has more social significance than the education of an equal number of children of average intelligence." It may make the difference between law-abiding, self-supporting individuals and dependent or delinquent members of society. Whereas traditional education discovered what the mental defectives could not do, special education discovers what they can do. Its aim is that of developing the major possibilities of the mental defective to such an extent that he will become a law-abiding and self-supporting individual, one who is able to compete successfully with his normal fellows. Such competition, it must be recalled, is only with the 5 or 10% of the normal population most inferior in intelligence, who are engaged in unskilled labor. Success in such work requires health, strength, endurance and motor coordination. Since these children are lacking in judgment and reasoning, imitation and habit must be substituted. Whereas traditional education is interested in laying broad foundations of knowledge, mental defectives should be taught only what they need to know and only when they need to know it in order to teach them anything at all.—*M. W. Kuensel* (Vineland Training School).

1680. Brethfeld, M. *Zur Theorie und Praxis der Jugendschriftenbewegung*. (Theory and practice of the children's writing movement.) *Neue Bahnen*, 1930, 41, 435-440.—*A. Römer* (Leipzig).

1681. Brolyer, C. R. Fifth annual report of the commission on scholastic aptitude tests. New York: College Entrance Examination Board, 1930. Pp. 28.—4,602 boys and 3,551 girls were final candidates for admission to the various colleges. Means, sigmas and numerous correlations are given, also comparative data for the years 1928, '29, '30. On repeated examinations the correlations between first and second scores ranged from .91 to .95.—*E. B. Heim* (Provo, Utah).

1682. Carrigan, R. A. Carrigan score card for rating teaching and the teacher. *Yonkers-on-Hudson: World Book*, 1930. Pp. 4. \$1.00 (pkg. of 25).—*D. Shakow* (Worcester State Hospital).

1683. Case, R. T. A study of the placement in the curriculum of selected teachings of the Old Testament prophets. *Univ. Iowa Stud.: Stud. Char.*, 1930, 2, No. 4. Pp. 54.—Comprehension tests using selected quotations of the Old Testament prophets were given to 2,655 school children from grades four to twelve inclusive. There was a steady rise in com-

prehension from one mental age to the next. Below mental age fourteen there was not adequate enough comprehension to justify placement of the materials used in the curriculum. There was no relationship between the degree of comprehension and amount of religious training or socio-economic status as measured by the Sims scale. Girls showed better comprehension than boys.—*B. Wellman* (Iowa).

1684. Clapp, F. L. The Clapp test for correct English. Forms A and B. Boston: Houghton Mifflin, 1930.—A test of pupils' habits in English, 56 points being included to represent the most commonly found errors in language usage. Standards based on work of 30,000 pupils. Designed for Grades V to XII.—*L. A. Averill* (Worcester State Normal School).

1685. Clapp, F. L., & Heubner, B. P. The Clapp-Heubner number combination tests. I and II. Boston: Houghton Mifflin, 1930.—Test I presents the 390 basic combinations in single form. Test II presents the same combinations but in the form of actual examples in the fundamental processes. Each combination appears but once. Standards are given for both tests.—*L. A. Averill* (Worcester State Normal School).

1686. Clapp, F. L., & Young, R. V. The Clapp-Young answer booklet. Boston: Houghton Mifflin, 1930.—A device by which a teacher may build her own tests in any subjects and still have the advantage of the self-marking aspect of all the Clapp-Young tests. Space is provided for 100 items, with five choices for each.—*L. A. Averill* (Worcester State Normal School).

1687. Clapp, F. L., & Young, R. V. The Clapp-Young arithmetic test. Boston: Houghton Mifflin, 1930.—For Grades V to VIII, inclusive. Standardized and self-marking. Good diagnostic value.—*L. A. Averill* (Worcester State Normal School).

1688. Clapp, F. L., & Young, R. V. The Clapp-Young English test. Forms A and B. Boston: Houghton Mifflin, 1930.—For Grades V to XII. Standardized and self-marking. Comprises 100 items, covering 85% of all types of errors revealed by scientific studies of children's errors in English.—*L. A. Averill* (Worcester State Normal School).

1689. Clinton, R. J. Qualities college students desire in college instructors. *School & Soc.*, 1930, 32, 701.—*H. L. Koch* (Chicago).

1690. Corey, S. M. New type and essay examination scores. *School & Soc.*, 1930, 32, 849-850.—The data for the study were obtained from 102 students who took a three-hour examination in educational psychology which consisted of 6 essay questions and 96 multiple choice and 13 matching exercises. It is concluded that: "(a) a corrected coefficient of correlation of +.93 indicates that the new type and essay examinations measure very nearly the same thing; (b) reliability coefficients of +.58 and +.82 bring out the superior reliability of the new type examination, and (c) coefficients of +.62 and +.39 indicate that Army Alpha scores are more closely related to new type than to essay examina-

tion scores when the two cover the same materials."—*H. L. Koch* (Chicago).

1691. Coxe, W. W. Reliability of vocational choices of high-school students. *School & Soc.*, 1930, 32, 816-818.—Material concerning the occupational interests of 9000 high-school students was gathered by means of a questionnaire, as was also material concerning the occupations followed by approximately 900 individuals who had left high school. The study compares the incidence of specific occupational ambitions with the incidence of occupational endeavors. These percentages agree fairly well with respect to the skilled trades, clerical work, and agriculture. Relatively more people, however, were found in business and fewer in the professions than the interests expressed by the high-school students would lead one to expect. The study does not touch the question of the relation between interest and accomplishment in individuals.—*H. L. Koch* (Chicago).

1692. Doll, E. A. Mental hygiene aspects of special education. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 73-79.—"Special classes in the public school promote much better educational and social progress of the handicapped school child than is accompanied by the regular grades, and tend to preserve a better condition of emotional adjustment. The special class therefore has a mental health value for children of school age, besides promoting more effective public school instruction for such children. A classification clinic, combining the resources of medical, psychological, psychiatric and social work, is an indispensable prerequisite of special education. A survey in a representative city reveals need for no less than fifteen different types of special classes with correlated differential instruction. The special class as an agency in the mental hygiene movement should be constructively capitalized for this purpose."—*M. W. Kuenzel* (Vineland Training School).

1693. Ehrenberg, R. Das Problem der sittlichen Erziehbarkeit im Lichte der Biologie. (The problem of moral educability in the light of biology.) *Evangel. Päd.*, 1930, 5, 161-174.—*A. Römer* (Leipzig).

1694. Feld, F. Sinn und Aufbau einer Geschichte der Berufsberatung. (Content and structure of a history of vocational counselling.) *Zsch. f. Geschichte d. Erziehung u. d. Unterrichts*, 1930, 20, 120-143.—*A. Römer* (Leipzig).

1695. Finley, J. B. Winning the interest of children. *Tr. School Bull.*, 1930, 27, 25-29.—Interest in sewing is held by giving the child a real article to make, no matter how poorly she sews, instead of a scrap of material. Color plays a real part in winning the interest of most girls. Competition with each other and with their former efforts plays a very important part in securing interest. Deserved praise is always encouraging. Children who lose interest easily are given articles which can soon be completed. Summary: (1) make something for somebody at the beginning lesson; (2) teach fundamentals of sewing as sewing, not as fundamentals; (3) introduce new stitches in making new articles;

(4) color discrimination is worthy of consideration; (5) interest is inspired by letting children select their own models; (6) a change of work is desirable.—*E. M. Achilles* (Columbia).

1696. Gardner, G., & Hilton, H. The part-time student. *School & Soc.*, 1930, 32, 706-708.—The authors discuss the plan in operation in Granite District, Utah, for keeping in school, when they are not at work, all children of high-school age. The plan includes a part-time continuation school with a very plastic program which can be adapted to the pupils who find it necessary to come and go. Although the group who work part of the time are below par intellectually and are academically retarded, the plan has seemingly yielded returns in that idleness has been reduced and probably also social-industrial maladjustment.—*H. L. Koch* (Chicago).

1697. Gates, A. I. Characteristics and uses of practice exercises in reading. *Teach. Coll. Rec.*, 1930, 32, 221-235.—"Although it has a history of misuse, the practice exercise contains certain characteristics that deserve application to school use. . . . It will be the purpose of this article to suggest certain usages that may be made of the practice exercise in reading."—*J. M. Stalnaker* (Purdue).

1698. Hehlmann, W. Über Gewöhnung und ihren Anteil an der Erziehung. (About habituation and its part in training.) *Deutsche Schule*, 1930, 34, 528-536.—The article opens the discussion of the physiological correlates of psychic experiences and the environmental experiences that call forth the habituated act. He discriminates between practice (*Übung*) and readiness to act (*Gewöhnung*) and sets forth the fact that the former does not necessarily bring forth readiness to act, worth-while habituation. Pedagogy is concerned with readiness to function in similar or in varying circumstances. The author discusses the relationship between habituation, with its lack of necessity for thought, and the problem of human responsibility. Too often mere habit formation is the end in mind, while thought should be directed to the act of choosing the situation in which the habit should function. Self-development is not only habit formation, but tendency to evaluation, realization of values according to situations. James is wrong when he thinks of man as a bundle of habits. In most fields of action habituation does not play an important part. It never gives significance to an act. The creative act is always free. Here lies the problem of education. A function may be habituated, but the inner sense is free and varies for the individual and in the situation.—*A. B. Herrig* (Michigan Central State Teachers College).

1699. Huber, F. Unterrichtsgruppen und Gruppenunterricht. (Instruction groups and group instruction.) *Volksschulwart*, 1930, 18, 501-511.—*A. Römer* (Leipzig).

1700. Kelley, T. L. A communication concerning the difficulty of achievement test items. *J. Educ. Res.*, 1930, 22, 309-314.—Kelley considers some of the criticisms which G. M. Wilson had made of the Stanford Achievement Tests, particularly the test which considers achievement in spelling, and attempts

to justify the use of words found in neither the Thorndike nor the Horn Word List. To this Wilson makes a rejoinder (pp. 315-316).—S. W. Fernberger (Pennsylvania).

1701. Kornhauser, A. W. Changes in the information and attitudes of students in an economics course. *J. Educ. Res.*, 1930, 22, 288-298.—Tests were given before and after a course in economics at the University of Chicago during the years 1926-1928. True-false and multiple answer types of tests were used along with the Otis Higher Examination as an intelligence test. In all about 400 students were tested. Improvement in general was noted as a result of the course. Fairly extensive changes in attitude toward economic problems that really matter were also noted. Individual differences in improvement are not related to intellectual ability, but are inversely related to the amount of economic knowledge at the outset of the course. With regard to the development of attitudes there was a strengthening of opinions which resulted in fewer "undecided" answers, increased liberalism, fewer extreme responses and a greater liking for scientific procedure.—S. W. Fernberger (Pennsylvania).

1702. Lehman, H. C., & Stoke, S. M. Is the heavy schedule an incentive to greater effort? *School & Soc.*, 1930, 32, 767-771.—Three groups of students were studied. In the case of one group, the students, in the semester following that in which they had carried a normal number of courses, took on an extra academic load; in another group, the number of courses taken in the second semester remained the same as in the first; while in the third group, the schedule was lightened. The students submitting to the heavier program not only earned more hours of credit than did the others but the average quality of the work they did was better. The less taxing the program in general, the less effective the scholarship seemed to be. This trend was revealed not only by group but by individual comparisons as well. Several hypotheses which may account for the findings are presented.—H. L. Koch (Chicago).

1703. Litt, T. Zur Ansele der Begabten. (The selection of the gifted.) *Studenten-Werk*, 1930, 4, 181-185.—A. Römer (Leipzig).

1704. Lombardo-Radice, G. Il problema dell'educazione infantile. (The problem of child education.) Venice: Nuova Italia, 1929. Pp. 236.—A reprint of two articles published in *L'Educazione Nazionale*. The first concerns the hospital of Momiano during the years 1893-1920 and contains a long analysis of the material and method of Ogazzi. The second article concerns the "Fabre" children of Portomaggiore, that is to say the didactic experiments by Rina Nigrisoli in 1919-1925. The bibliography contains references on the new Italian methods of teaching and on scholastic reform for 1923.—V. D'Agostino (Turin).

1705. McClure, W. E. The status of psychological testing in large city public school systems. *J. Appl. Psychol.*, 1930, 14, 486-496.—An analysis of questionnaire returns from 86 cities (population

100,000 or more) covering type of organization for psychological testing in the school systems, date of its beginning, training requirements and salaries of examiners and department heads, types of tests administered, and uses made of test results.—G. L. Barclay (Syracuse).

1706. Millias, W. W. A consideration of the aspects of emotion in the efficiency and the training of mental defectives. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 82-93.—The emotional life of mental defectives can be expressed, according to the author's thesis, only by their actual performance of muscular work. Satisfaction cannot be gained through reading or watching the exploits of others. Therefore in their training and later vocational placement the fact that they must find expression in physical activity and work must be recognized if success and happiness are desired for them. In order to make a successful adjustment the mentally defective child must lose any sense of restraint or must learn to accept prohibitions as natural. Applications are discussed to both institutional and public school training.—M. W. Kuensel (Vineland Training School).

1707. Muse, M. B. A study outline designed to assist students of nursing who are taking an introductory course in educational psychology. (2d ed., rev.) Philadelphia: Saunders, 1930. Pp. 166. \$2.00.—A revision of the earlier *Study Outline* to accompany the new edition of the author's *Psychology for Nurses*. The general topics treated are: the nature and scope of psychology; the behavior mechanisms of man, receptors, connectors and effectors; cortical responses; native traits and tendencies; thwarted tendencies and maladjustment; measurement of intelligence; the psychology of learning; the psychology of childhood; learned mental disorders and mental hygiene. As stated in the preface, "The additional references have been brought up to date, and a few changes in spacing and assignments have been made which should improve the usefulness of the syllabus. The *Study Outline* is so organized that it may be used in either a one- or a two-semester course.—W. McTeer (Detroit City College).

1708. Nelson, M. J., & Denny, E. C. The Nelson-Denny reading test. For senior high school and college students. Boston: Houghton Mifflin, 1930.—Self-marking. Designed to test probable success in college, to assist in classification of incoming students, and to aid in diagnosis of student difficulties.—L. A. Averill (Worcester State Normal School).

1709. Nifenecker, E. A. [Ed.] The ability of children in map reading. New York: Board of Education, 1930. No. 16. Pp. 15.—An attempt to find out what the skills involved in map reading are, to measure them, and to suggest methods for improving them. With this point in view a test consisting of 52 questions, grouped under the five general headings (1) latitude and longitude, (2) directions, (3) use of legend or key, (4) interpretation of special maps, and (5) reasoning out probable effects from causes revealed by a map, was given to 680 pupils. The general result showed that many school children are unable to visualize conditions depicted by some

of the map symbols in common use. Remedial suggestions are presented for difficulties in each of the five general groups.—*M. Bernstein* (Clark).

1710. Noll, V. H. *Laboratory instruction in the field of inorganic chemistry*. Minneapolis: Univ. Minn. Press, 1930. Pp. xix + 164. \$2.00.—This problem arose as an attempt at evaluating certain aspects of laboratory instruction. A preliminary comparison of two groups whose instruction was quite similar except for amount of laboratory work showed the group with more laboratory work to be superior in achievement. Two measures of outcomes of instruction in general inorganic chemistry were constructed and evaluated. The Test of Chemistry Achievement (TCA), based on a minimum number of laboratory experiments performed by all groups, proved to be a valid predictive as well as final measure of achievement in these courses. The coefficients are given. The Test of Laboratory Aptitude (TLA) also proved a reliable measure, although its validity was not so well established as that of TCA. When two groups are compared, one having had five hours of laboratory a week and the other three hours of laboratory and two hours per week of outside reading, it is seen that the former group is superior. Comparison of a group having five hours of laboratory with one having three hours of laboratory and one hour of oral recitation showed the latter group to be superior. The group having five hours of laboratory a week was in all respects superior to a group having three hours of laboratory unsupplemented by recitation, etc. Motivating features play definite rôles in the results. Students who had had chemistry in high school were superior to those who had not. The report concludes with several recommendations: two hours of laboratory work do not seem to be indispensable; courses should be created for people who enter with no high school preparation as opposed to those who enter with some; oral quizzing should be stressed. Caution must be used in generalizing the results.—*C. H. Graham* (Temple).

1711. Oliver, R. A. C. *Psychological and pedagogical considerations in the making of text-books*. Africa, 1930, 3, 293-305.—(*Soc. Sci. Abst.* II: 16861).

1712. Overman, J. R. *An experimental study of the effect of the method of instruction on transfer in arithmetic*. *Elem. School J.*, 1930, 31, 183-190.—The effect of instruction in three types of two-place addition upon closely related two- and three-place addition and subtraction, is reported for 52 second-grade classes. The spread to related processes is reported also. The classes were divided into four equated groups. Each was taught by different methods: (1) drill was given without generalization; (2) generalization was employed; (3) rationalization was encouraged; (4) both generalization and rationalization were utilized. Useful and apparently significant amounts of transfer are reported; the largest amount occurred in the group stressing the process of generalization.—*P. A. Witty* (Northwestern).

1713. Ponso, M. *Per uno migliori conoscenza dei nostri realtivi fisici e mentali ad interesse psicotecnico*. (For a better understanding of our physical

and mental tests in the interest of psychotechnics.) *Rass. di med. appl. lavoro indus.*, 1930, 1, 199-203.—After taking note of the Italian criticisms of tests, theory and practice, made by Colucci, De Sanctis, Lorigo, and Vigliani, the author notes the importance of a more complete knowledge of tests themselves. Mention is made of the initiative taken by the author and others in collecting the Italian mental and physical tests. The belief is expressed that an international collection of mental tests will be possible only after the different countries succeed in collecting their own tests. Thus one might have series of tests international and constant in character, the necessity for which has been insisted upon by De Sanctis, Claparède, and others.—*A. Angyal* (Turin).

1714. Pressey, S. L., & Pressey, L. C. *Experimenting with the examination*. *J. Higher Educ.*, 1930, 1, 396-398.—Members of a class of 96 students were allowed re-examination on request, the grades of the re-examination to determine final grade. The result was an increase in average grade and presumably an increase in average knowledge of the subject.—*E. R. Guthrie* (Washington).

1715. Proctor, W. M. *Evaluating guidance activities*. *Voc. Guid. Mag.*, 1930, 2, 58-66.—A score card for evaluating educational and vocational guidance plans in secondary schools, with accompanying notes and directions.—*E. B. Heim* (Provo, Utah).

1716. Repp, A. C., & Knight, F. B. *Objective tests and review units in geography*. I. Western hemisphere. II. Eastern hemisphere. Pp. 104 and 116. \$.48 each.—*R. R. Willoughby* (Clark).

1717. Rolfe, H. *Von den Grenzen des psychologischen Experimentes*. (On the limits of psychological experiments.) *Lehrer u. Volk*, 1930, 31, 167-173.—*A. Römer* (Leipzig).

1718. Ross, V. R. *A preliminary investigation of the effect of radio reception on school achievement*. *J. Appl. Psychol.*, 1930, 14, 456-464.—77 high school pupils were given Stanford Achievement Tests in reading and arithmetic with and without the distraction of radio program reception, and also were required to study text assignments in physics and chemistry with and without such distraction, and were tested for acquisition of information during the periods of study. Radio reception does not seem to produce any significant effect.—*G. L. Barclay* (Syracuse).

1719. Smeltzer, C. H. *A method of determining what college students consider their own difficulties*. *School & Soc.*, 1930, 32, 709-710.—Somewhat over 100 students in college courses in psychology enumerated the difficulties they encountered which they thought resulted in deleterious effects upon their work. The 281 difficulties mentioned were reduced by grouping to 20 major types and these, in turn, were ranked by 721 individuals selected so as to represent the total student body. According to these rankings some of the major sources of trouble are the following: the instructor expects too much or fails to remember that students forget much of what they once had learned; the student himself is unable to concentrate, to use his time to advantage, and to select

wisely what to learn; and classes are too large.—H. L. Koch (Chicago).

1720. Spranger, E. Probleme der Begabtenförderung. (The problem of the promotion of the gifted.) *Studenten-Werk*, 1930, 4, 165-181.—A. Römer (Leipzig).

1721. Stalnaker, J. M. An investigation of the success of the Indiana high-school graduates in Indiana higher institutions of education. *School & Soc.*, 1930, 32, 813-816.—H. L. Koch (Chicago).

1722. Streicher, M. Die Erziehung zu guter Haltung und Bewegung. (Education for good conduct and action.) *Oesterreichische Vjschr. f. Erziehung u. Unterricht*, 1930, 1, 79-86.—A. Römer (Leipzig).

1723. Tireman, L. S. Value of marking hard spots in spelling. *Univ. Iowa Stud.: Stud. Educ.*, 1930, 5, No. 4, Pp. 48.—Four methods of marking hard spots in spelling were tried out on more than 4,000 pupils of grades four, six and eight. Marking the hard spots was found to be a useless device and possibly a harmful one.—B. Wellman (Iowa).

1724. Tumlrz, O. Die Stufen der geistigen Entwicklung und die Berufsberatung. (Steps in mental growth and vocational guidance.) *Oesterreichische Vjschr. f. Erziehung u. Unterricht*, 1930, 1, 109-119.—A. Römer (Leipzig).

1725. Walker, N. T. The sources of Herbert Spencer's educational ideas. *J. Educ. Res.*, 1930, 22, 299-308.—The origin of some of Spencer's educational ideas from Priestley, Wyse, Biber and Mareel is shown.—S. W. Fernberger (Pennsylvania).

1726. Walters, F. C. Standards of attainment for high school seniors in Porto Rico. *Porto Rico School Rev.*, 1930, 15, 12-14.—This study is based on the University of Porto Rico General Ability Test scores of over 2000 high school seniors. Factors of standardization, minimum requirements, and varying standards of attainment in different schools are emphasized. A comparison made with seniors in the United States (who had taken similar tests) for variability in standard deviation units yielded a practically negligible difference.—J. W. Ross (Clark).

1727. Wilke, E. Ueber Willensbildung und musikalische Erziehung im ersten Volksschulalter. (Cultivation of the will and musical education in the primary grades.) *Päd. R. Steiners*, 1930, 4, 105-112.—A. Römer (Leipzig).

1728. Yepsen, L. N. Escuela Experimental de Desarrollo. *Tr. School Bull.*, 1930, 27, 21-25.—The Experimental Development School was founded in Chile for the purposes (1) of being a demonstration school, and (2) of training teachers of children in need of differential education. The first class opened in July, 1929, and by December had 54 children below the chronological age of 11.5 years. No conclusions can be reached regarding retardation in Chile. Preliminary studies indicate that it needs serious study. Enrollment in a boys' school dropped from 115 in the first year to 13 in the sixth year.—E. M. Achilles (Columbia).

[See also abstracts 1410, 1459, 1532, 1579, 1646, 1659, 1661, 1739.]

BIOMETRY AND STATISTICS

1729. Douglass, H. R. A further note on the corrections of certain error formulas. *J. Educ. Psychol.*, 1930, 21, 621-624.—A reply to a criticism by Holzinger in *J. Educ. Psychol.*, 1929, 20, 669-670 (IV: 1407).—J. A. McGeoch (Missouri).

1730. Dunlap, J. W., & Cureton, E. E. Note on the standard response error in a measure of improvement. *J. Educ. Psychol.*, 1930, 21, 625-626.—A correction of a formula by Lindquist in *J. Educ. Psychol.*, 1930, 21, 229-230 (IV: 2858).—J. A. McGeoch (Missouri).

1731. Symonds, P. M. A comparison of statistical measures of overlapping with charts for estimating the value of bi-serial r . *J. Educ. Psychol.*, 1930, 21, 586-596.—A comparison is made of three methods of describing the overlapping of distributions: (1) the per cent of one reaching or exceeding the median of the other; (2) the difference between the means; and (3) bi-serial r . Charts are given showing the overlapping of two distributions for every value of bi-serial r from .00 to .95. The writer believes that the advantages of bi-serial r have not been fully appreciated. It is easy to find; it permits an estimate of the reliability of a difference; it is comparable to the product moment coefficient of correlation; and "it is possible to compare differences between groups when different tests are used because bi-serial r represents a common unit of measurement."—J. A. McGeoch (Missouri).

1732. Weaver, W. The reign of probability. *Scient. Mo.*, 1930, 31, 457-466.—The importance of probability in daily life and in pure and applied sciences is stressed.—J. F. Dashiell (North Carolina).

[See also abstracts 1425, 1473, 1737.]

MENTAL TESTS

1733. Bain, R. Theory and measurement of attitudes and opinions. *Psychol. Bull.*, 1930, 27, 357-379.—261 titles are reviewed and listed under the following headings: attitude theory; measurement; theory and technique; overt behavior attitudes; case study methods and attitudes; verbal attitudes (opinions); and changing attitudes and opinions.—J. F. Dashiell (North Carolina).

1734. Bossart, F. Über Bewährungskontrollen. (Concerning controls through verification.) *Psychol. Rundschau*, 1930, 2, 216-222.—The author gives three methods of control through verification: (1) comparison with previously applied tests of intelligence and character; (2) comparison with results of other testing methods; (3) comparison with the personal judgment of the tester. He holds that the attitude toward testing in Switzerland differs from that of any other country in laying emphasis on retaining the character of the individual, not losing sight of him by comparing him with a norm, and so Switzerland looks for verification methods as no other country does. He defines the viewpoints of both the intelligence tester and the technician and outlines the possibility of dovetailing the work of the two in order that a true picture of the totality of the individual may be gained. A scheme for personal ob-

servation and consequent interpretation of personality traits accompanies the article.—*A. B. Herrig* (Michigan Central State Teachers College).

1735. Broom, M. E. A study of a test of ascendance-submission. *J. Appl. Psychol.*, 1930, 14, 405-413.—Submissive individuals achieve lower academic records than dominant persons; within the former group high marks do not correlate well with mental ability. The author makes the statement in his conclusions that "the validity of the Allport test is probably satisfactory in view of the low reliability of the instrument. Improvement in reliability would probably tend to increase validity sufficiently." The A-S test results appear to have value in supplementing measures of mental ability as a basis for predicting academic success, particularly with reference to ascendant individuals. About 200 subjects were used.—*G. L. Barclay* (Syracuse).

1736. Bruce, W. F. Habits, intelligence, and analysis. *J. Educ. Psychol.*, 1930, 21, 574-585.—Examples of the current distinction between habit and intelligence are cited and examined. In opposition to the purport of these examples, the writer believes the distinction to be untenable and in particular "that a contrast between habitual acts and intelligent ones, which is based upon the presence or absence of analysis, is not supported by the facts." In support of this he sets out to show (1) that the acquisition and maintenance of habits involves analysis; (2) that the analysis found in intelligent action is not clearly different from that which can be discovered in skills; and (3) that intelligent conceptions, like habits, may be organized to a degree which defies verbal description.—*J. A. McGeoch* (Missouri).

1737. Burks, B. S. When does a test measure the same functions at all levels? *J. Educ. Psychol.*, 1930, 21, 616-620.—A method, involving Wright's path coefficients, is developed "for determining when fluctuations in IQ (or in any test score) over a period of time are due to real changes in ability and not to changes in the nature of the measuring instrument, and for ascertaining when the fluctuations may be accounted for entirely by changes in the functions measured."—*J. A. McGeoch* (Missouri).

1738. Carter, H. D. A reply to Professor Spearman. *J. Educ. Psychol.*, 1930, 21, 627-628.—A reply to the paper in *J. Educ. Psychol.*, 1930, 21, 110-111 (IV: 2566).—*J. A. McGeoch* (Missouri).

1739. Gilliland, A. R. Personality tests and scholastic attainment. *Person. J.*, 1930, 9, 305-308.—Two radically different attitudes have been held regarding personality tests. One group of students has been skeptical about their value and possibilities. The other group has often claimed more for such tests than could be justified. This article reports a study of the Pressey "X-O" test and the Colgate Mental Hygiene Tests, in predicting scholastic attainments of college students. The results, based on 144 cases, show them to be of little or no use for this purpose. That fact, however, does not invalidate the tests for other purposes.—(Courtesy *Person. J.*).

1740. Keen, A. M. Growth curves and IQ's as determined by testing large families. *School & Soc.*, 1930, 32, 737-742.—The author, defining mental growth as the maturation of inner capacities and tendencies, conceived of the IQ as a constant measure of ability. Since it is such by definition, its constancy, then, she contends must be maintained. This latter she proposes to accomplish for the Stanford-Binet test by manipulating the divisor. Adult mental age (16) and the chronological age (20) at which mental growth ceases ought, for instance, in her opinion, to be the same. The equivalences of test score gains at various levels she attempted to discover by testing all the members of large families and by assuming that on the average the differences between sibs (who are substituted for the same child at different intervals) in mental age should maintain a constant relationship to the average of their differences in chronological age. A table of corrected chronological age divisors is worked out for the Stanford-Binet test, observing this principle, and these are then offered as substitutes for the real chronological ages in computing the IQ. The general method of using large families instead of taking many measures on the same individuals the author thinks especially valuable in the study of the growth rates of specific traits.—*H. L. Koch* (Chicago).

1741. Ludeman, W. W., & McAnelly, J. E. Intelligence of colony people. *J. Educ. Psychol.*, 1930, 21, 612-615.—Three intelligence tests were given to 32 communistic colony children who had been reared in a limited environment. Their median intelligence was much lower than the average. They experienced greatest difficulty with tests requiring environmental knowledge and least "where native intelligence was required." The low average is attributed to limited environmental conditions.—*J. A. McGeoch* (Missouri).

1742. McCarthy, D. A study of the Seashore measures of musical talent. *J. Appl. Psychol.*, 1930, 14, 437-455.—The study attempts to determine the reliability and validity of the Seashore tests, and also the relative importance of the various factors measured by them in making up general musical talent. Subjects used included 93 university students and 71 children in the 5th and 6th grades. The test for tonal memory showed considerably higher reliability and validity than those for pitch and intensity, while the test for consonance was found to be quite low. Marked age differences were noted. A decided practice effect was found in tonal memory, but not in the others. In general, Seashore's contentions regarding these tests are supported by this study. Bibliography of 21 titles.—*G. L. Barclay* (Syracuse).

1743. Meili, R. Recherches sur les formes d'intelligence. (Studies of the forms of intelligence.) *Arch. de psychol.*, 1930, 22, 201-284.—Does intelligence have a single dimension, and is its quantitative development sufficiently represented by a number? Is it necessary on the other hand to distinguish several qualities of intelligence? In order to find the answer to this question the author has examined

about 900 persons of both sexes from 10 years of age to adults. The following six tests were used, for each of which is given a detailed description, the technic, and the scoring method: (1) Number series, made according to a certain rule, which the subject is to complete by adding two numbers. (2) Four pictures, representing four stages of the same action, are presented in a random order and the subject must arrange them in the correct order. (3) Construct a figure X which will be to a figure Y as a figure B is to a figure A. (4) Imagine the object corresponding to a picture which lacks something. (5) Invention of designs, combining freely and in diverse ways certain given symbols. (6) Invention of sentences, forming as many sentences as possible each to include 3 given words. For each test the author gives distribution tables for age and curves of development. As to validity, the author gives the correlations between two equivalent forms of the same test. The correlations between the tests, calculated with 5 groups of subjects, show that the more homogeneous a group is the lower are the correlations and the greater are the differences between the different correlations of the group. The results are considered in relation to Spearman's theory. The tetrad difference is not found in the three groups of male subjects grouped together. It is more present in the female group, and it is perfectly found in a group of boys and girls, aged 15-18 years, to whom in addition to the 6 tests described 6 other tests have been given. The criterion of the hierarchy of Spearman gives values of -0.08 for the male subjects and $+0.06$ for the females. It does not seem possible, therefore, to interpret the tests solely in terms of g and 6 special factors. The author then applies Kelley's method and is able to distinguish besides the factor g several other factors which he calls concrete, abstract, analytic, inventive, visual, impulse, and rapidity. When numerical values are assigned to these factors, theoretical correlations are secured which approximate very closely the empirical correlations. For the girls and the 15-18-year group the analysis does not succeed, and the author gives only a hypothetical interpretation of certain correlations. The results obtained by this method are confirmed by an analysis of the inter-columnar correlations and by an analysis of the intelligence profile of 200 adults and 200 children. A table in this connection shows the intelligence profiles of certain professional groups. From the frequency of different forms of profiles and from the fact that the correlations are not the same for the different groups of subjects the author concludes that the psychological significance of the tests may, within certain limits, vary from one subject to another. For the interpretation of his statistical results the author makes use of the theory of Gestalt. The intelligent act is the passage from an initial state of disequilibrium to a final state of equilibrium. These states are the Gestalten; and the transition from one to another is made by virtue of a process in which may be distinguished the different qualities which correspond to the factors found by statistical analysis. The psychological significance of analytic-inventive, abstract-concrete, and

of the factor visual is similarly given in terms of the essential qualities of the intellectual process.—M. R. Lambercier (Geneva).

1744. Pernambuco, U., & Barretto, A. P. *Ensaio de aplicação do test das 100 questões de Ballard.* (A study of the application of Ballard's test of 100 questions.) *Arch. bras. de hygiène ment.*, 1930 (September). Pp. 35.—The authors present results which they obtained from the application of the Ballard test of 100 questions adapted for the Portuguese language and the center of northeastern Brazil. The questions were submitted to 3248 students (1414 boys and 1834 girls) of 42 schools and from all social levels. The results, in general, were clearly below those found by Deeroly in Belgium. This difference, however, was equivalent to 22.5 for eight years, decreasing with an increase in age, in such a way that at the age of seventeen it did not reach 1.27. At fifteen years, however, there is an increase of 1.88. On comparing the test with the Stanford-Binet, the authors found a correlation of $.761 \pm .044$. They computed the mean, median, mode and percentiles for all ages and classes studied, and conclude that the test is useful for discriminating between classes.—J. W. H. Ross (Clark).

1745. Spearman, C. Disturbances of tetrad differences. *Scales. J. Educ. Psychol.*, 1930, 21, 559-573.—In reply to the demand for correlations and tetrad differences derived from large numbers of cases, Spearman urges that there exist disturbances, other than errors of sampling, which may even be augmented by an increase in the number of cases. To test the theory of a general factor, "the observed tetrad differences should be compared, not merely with their probable errors, but with the aggregates of all the disturbances which by the theory ought to occur." A list of these other disturbances is reviewed. The major examples are: group factors arising from excessive likeness between the abilities involved and from accidental linkage; heterogeneity of subjects, especially in race, age, sex and education; dealing with either accuracy or speed separately; and testing the subjects in separate sections and under different conditions. The factor of variation of scale is given particular attention and examples are worked out illustrating its effects.—J. A. McGeech (Missouri).

1746. Suter, J. *Zur Geschichte der systematischen psychologischen Beobachtungen für die Begutachtung der Intelligenz.* (A contribution to the history of systematic observation in the judgment of intelligence.) *Psychol. Rundschau*, 1930, 2, 196-200.—The author reviews the whole movement for a better diagnosis of the psychic life of the individual. He begins with the efforts of Wundt in 1879, and his pupil, Cattell in America, tracing through Ebbinghaus, Bobertag and Binet. He follows the wide spread of the Binet method through its adaptation in America by Terman, and the use of group testing as a help with larger numbers. Emphasis is placed upon the factor of personal systematic observation during the period of testing. Only by this aid can

psychotechnics render the service that in all fields is the demand that is made on intelligence testing today.—A. B. Herrig (Michigan Central State Teachers College).

1747. Weinland, J. D. An objective method for the measurement of attitudes. *J. Appl. Psychol.*, 1930, 14, 427-436.—Three studies (a, 50 men and 50 women, b, 91 men, c, 78 men) were made in which the subjects were required to judge the truth of proverbial expressions (in studies a and b) or to rank according to relative value (in c) various "assets" in one's life, i.e., personal characteristics (as honor, intelligence, sanity, sportsmanship), and such things as business connections, wealth, luck, social position. Answers were weighted according to the frequency of such answers in the group studied, and totaled to give a measure of conformity to group opinion. "In

its present state the report merely outlines a method."—G. L. Barclay (Syracuse).

1748. Wells, F. L. New problems in psychometrics. *Proc. & Addr. Amer. Asso. Stud. Feeble-Mind.*, 1930, 35, 94-103.—Recent ideas in psychometrics are discussed in a general way by the author, such as the description and interpretative features seen in the dichotomy of number and word functions; the problem of altitude measurement as compared with that of speed and range; the problem of dealing with situations in terms of their consequences; the qualitative value of the Rorschach test; and the need of a more inductive approach to the whole concept of mental hygiene.—M. W. Kuensel (Vineland Training School).

[See also abstracts 1339, 1346, 1380, 1402, 1576, 1650, 1681.]

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